To Give Or Not To Give

A Step Towards Addressing The Heart Of
Innovative Climates

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Creativity and Productivity

Some call it "being in the moment". Athletes talk about being "in the zone", musicians talk about being "in the groove". It is a state of mind where everything just comes naturally and flows freely. In these higher states of consciousness we tend to be more creative and are more productive with less or no strenuous effort. Time flies almost without notice and the quality of our work reaches a higher level and we seem to be more connected with the goal and to our fellow colleagues and friends. Until now these elevated states of mind seem to be only attributed to the artistic or athletic endeavors, but is it possible to achieve this in an engineering setting? Attempts have been made to accomplish an increase of well being and productivity at the work place by exploring new team building techniques or by attending seminars devoted to increasing communications skills. However these approaches only go skin deep and rarely have lasting effects on the individuals or the cooperation. What appears to be missing is allowing the employees to attain thorough understanding of the meaning of their work and their contribution to the whole. Not only in their contribution to the workplace but also a deepened understanding of their part of the bigger picture that bring liveliness and joy to their life. This joy and dedication eventually shines through and they tend to give higher quality results.

For engineers to work at the best of their capacity these concepts must be understood and mastered. The business world has begun to acknowledged the importance of the consciousness of their employees and this can be recognized by the explosion of meaningful and motivational lectures broadcasted by TED and the Google Headquarters, new leadership technics like The Arbinger Institute and the focus on Cooperate Ethics in large corporations throughout the world to name a few. This new trend is allowing engineers to broaden their skills in their key engineering topics and their state of consciousness by providing courses that give the students and employees an understanding to what is at the root of all creativity, concentration and productivity. Product designers are treading into a time in human evolution where their responsibility to design eco-friendly and sustainable products is more prevalent then ever, and the consequences of their actions are becoming graver. Therefore it is important for all product developers to start to become aware of their influence on the whole and begin to address the concept of their role in a sustainable society. In this ever advancing civilization we begin to hear murmurs of ethical concepts like self-deception, self- awareness, self-control etc. being mentioned on nearly every campus from Berkley, MIT, Harvard to IIT Madras and corporations are beginning to introduce these concepts in their management

strategies with the intention of increasing their personnel's well being, creativity and productivity. Many feel that this is the next step that is necessary to take the effectiveness of individuals and groups to the next level.

New product development puts a high demand on innovators to be able to maintain control over their character and to sustain a high level of creativity no matter what challenges may arise, for example during the fuzzy front end. This thesis is to display some of the important aspects to sustaining a correct mindset in order to be able to manage the negative emotions that one is met with in stressful or uncomfortable situations. The student is to discuss methods of how to adequately portray the knowledge of establishing authentic relationship between human beings, with the intention of creating environments that allow productivity and creativity to flourish.
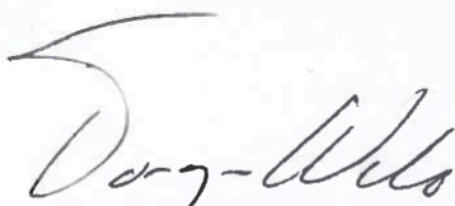
The following topics will be highlighted:

- Relationship between creativity and ethics and its relevance to the early stages of new product development
- Discussion of how different sources go about teaching these subjects
- Introduction to Bio-feedback measurements as a method of increasing ones presence

The thesis should include the signed problem text, and be written as a research report with summary both in English and Norwegian, conclusion, literature references, table of contents, etc. During preparation of the text, the candidate should make efforts to create a well arranged and well written report. To ease the evaluation of the thesis, it is important to cross-reference text, tables and figures. For evaluation of the work a thorough discussion of results is appreciated.

Three weeks after start of the thesis work, an A3 sheet illustrating the work is to be handed in. A template for this presentation is available on the IPM's web site under the menu "Masteroppgave" (http://www.ntnu.no/ipm/masteroppgave). This sheet should be updated one week before the Master's thesis is submitted.

The thesis shall be submitted electronically via DAIM, NTNU's system for Digital Archiving and Submission of Master's thesis.

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SUMMARY

Innovative climates are largely affected by the relationships between the individuals involved. This thesis addresses the topic of trying to improve the quality of relationships by giving engineers some tools and principles to understand in order for them to be able to contribute positively to a creative and productive atmosphere. Through the experiences drawn from universities both in India and Bhutan, the student tries to grasp some fundamental ideas about human values that can be shared to other engineers in practical manner.

This thesis begins by concentrating the importance of human relationships within an innovative process and within an organization. It has been found that groups and organizations perform better and have better cultures if people are willing to give help unconditionally. Based on this underlying idea of unconditional giving, this thesis introduces a model or principle called 'the box' which is a state of mind that one enters into when one self-betrays and is led to self-deception. In this self-deceived state one has betrayed one's inner feeling to do something for someone (for example not replying to an email, not holding open a door for a colleague etc.) and thus begins to justify this betrayal in one's mind by creating a distorted picture of reality. From this state of mind, one does not contribute positively to one's work or to one's relationships and it becomes clear that this betrayal is a betrayal of the heart. In order to increase the awareness of the heart and help build resilience from entering into 'the box', the thesis provides a method to get in touch with one's heart through biofeedback measurements.

Finally, the thesis addresses how we make value judgments, which is ultimately what defines our motives and behaviors in our homes and workplaces. It can be concluded that our value judgments are made by the combination of our heart, mind and will. Thus, by consciously learning more about our hearts, minds and will, how they function together and deepen more on what we find valuable, we can consciously begin the process of self-development. Through the process of self-development we increase our inner power (power over self) which is fundamentally different than external power (power over others). The thesis concludes that in order for us to contribute more positively to our innovative climates we have to increase our inner power. This is only done through the process of self-development where one concentrates on making continuous value judgments in alignment with the value supremacy of the human being. This process is not automatic and needs to be pursued consciously and directly however, as of now, the distribution of this type of knowledge is outside of the curriculum for engineering students. If we dedicate more energy to understanding the process of making value judgments, we can contribute more positively to our innovative climates.

SAMMENDRAG

Innovative klima er i stor grad påvirket av relasjonene mellom menneskene som er involvert. Gjennom denne avhandlingen prøver studenten å gi ingeniører noen verktøy og prinsipper for å være i stand til å bidra positivt til en kreativ og produktiv atmosfære. Gjennom erfaringene trukket fra universiteter både i India og Bhutan, forsøker studenten å forstå noen grunnleggende ideer om menneskelige verdier som kan deles med andre ingeniører på praktisk måte .

Denne avhandlingen begynner ved å konsentrere seg om viktigheten av menneskelige relasjoner innenfor en innovativ prosess og i en organisasjon. Grupper og organisasjoner yter bedre og har bedre kulturer hvis folk er villige til å gi ubetinget hjelp til hverandre. Basert på denne underliggende ideen om uselviskhet, introduserer denne avhandlingen en modell eller et prinsipp som heter 'boksen' som er en sinnstilstand som man går inn i når en er ført til selvbedrag. I denne selvbedratte tilstanden, har en forrådt ens indre følelse om å gjøre noe for noen andre (for eksempel å ikke svare på en e-post , ikke å holde oppe en dør for en kollega osv.) og dermed begynner å rettferdiggjøre dette sviket i tankene ved å opprette en forvrengt bilde av virkeligheten. Fra denne sinnstilstanden bidrar man ikke positivt til ens arbeid eller til ens relasjoner og man kan se på dette sviket som et svik av hjertet. For å øke bevisstheten om hjertet og bidra til å unngå komme inn i "boksen", gir avhandlingen en metode for å komme i kontakt med hjertet gjennom bio-feedback målinger .

Til slutt ser avhandlingen på hvordan vi tar verdivurderinger, som er i bunn og grunn det som definerer våre motiver og atferd i våre hjem og arbeidsplasser. Det kan konkluderes med at våre verdivurderinger er laget av en kombinasjon av vårt hjerte, sinn og vilje. Således, ved å lære mer om vårt hjerte, sinn og vilje (og hvordan de fungerer sammen) og om valgene man tar er i overenstemmelse med den verdien man finner mest verdifullt— nemlig mennesket— kan vi bevisst starte selvutviklings prosessen. Gjennom selvutviklings prosessen øker vi vår indre makt (makt over seg selv) som er fundamentalt annerledes enn ekstern makt som er makt over andre. Avhandlingen konkluderer med at for oss å bidra mer positivt til våre innovative klima må vi øke vår indre makt. Dette gjøres kun gjennom selvutvikling prosessen der man konsentrerer seg om å lage kontinuerlige verdivurderinger i tråd med verdi overlegenheten av mennesket. Denne prosessen er ikke automatisk og må angripes bevisst, men som nå er distribusjon av denne type kunnskap utenfor pensum for ingeniørstudenter. Hvis vi bruker mer energi for å forstå hvordan vi tar verdivurderinger, kan vi bidra mer positivt til våre innovative klima.

ACKNOWLEDGMENTS

I dedicate my degree to all my teachers for showing me the doors, and to my friends for helping me through them.

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INTRODUCTION

The topic is innovative climates. In other words, what atmosphere we have to have around us in order to be creative and productive engineers. I have found this topic to be a lot harder to grasp than first anticipated, because it has to a little bit to do with everything. Yet, as we shall see, this innovative atmosphere ultimately boils down to how we treat each other, our relationships. But how often during our education of becoming Mechanical Engineers do we actually learn about our interpersonal relationships? For throughout my education, I have very rarely (if at all) been introduced to how we can improve our relationships. It seems as if we don't think it is important, or just shrug it off and justify this opinion because it's 'not our field'. Which is peculiar because one of the crucial factors to having an innovative climate is having authentic relationships with the people involved. But we don't learn about this. Why is this so?

Before I go further, allow me to zoom out a bit and let us take look at human relationships from a global perspective and maybe that will give us some insight into why we are not talking too much about relationships as engineers. When we look at the world, it seems as if at this point in history humanity is at a turbulent stage of transition. This stage can be analogous to the unstable years of adolescence for an individual. Vast changes are happening so fast that its hard to keep up with what's going on and in every department of life we can see two processes occurring simultaneously as we move towards adulthood; a process of integration and a process of disastrous disintegration. It is obvious which is the most discernable as we see acts of violence, crime, induced poverty, corruption, terrorism etc. almost daily, while on a more subtle level (if we look hard enough) we can see signs of integration preparing us for transformation. Needless to say, on a global scale, things are not looking very good. In result, we try to seek out the immediate cause for this unjustness and blame whatever we perceive to be wrong usually referencing one or more of the following: capitalism, the military, the uneducated masses, the school system, the established churches, international corporations, communism, the clergy, the left, the right, the conservatives, the welfare system, the liberals or even pure and simple human nature.

However, at the end of the day, blaming the different components of the world system ultimately is a fruitless activity. Not that we shouldn't be intensely occupied with the faults of the current society or learn from our mistakes in history, but we have to stop satisfying ourselves with over simplistic answers to the worlds problems. We need to start to focus our energy on finding how we can contribute to solving the swelling problems of humanity. We need to innovate. Which leads us the question: who is going to do this? Who has this responsibility to make the changes that need to occur in our society? Who is going to create better relationships in our society?

It turns out that the answer to that question is a lot closer to home than we would think, because it starts with *ourselves*. Every individual on the planet has the responsibility to contribute to this transformation. And is our duty (especially) as engineers to be aware of this responsibility and we need to begin to understand that our actions are of immense importance. If we are going to be working in international companies where pen strokes at the top of the organization, have huge impacts on the outcome of what happens at the local level in different countries, we have to become continuously and increasingly aware of our influence on the world and our relationships. In short, we as engineers *have* to start thinking about interpersonal relationships and cannot shrug this off because it's not in our field.[1]

I realize that we can't change the innovative climate of the whole world, but what we can change, is our world. Our personal perspective or the world that we see everyday as we experience our daily lives, the relationships we have at home and in our workplaces. That's on a scale where which we can make a difference. In order to know how to maintain healthy innovative climates, we have to learn about them. For if we don't study these things, we don't have a conceptual framework or an understanding to able to describe our climate and just continue as is. And as alluded to earlier, 'as is' isn't good enough.

It seems as if we as engineers need to broaden our horizons a bit, and gain insight from other fields then our own. We need open ourselves up to new ways of doing things and a good place to start would be to learn a little more about relationships and human values. A quote by Linda-Darling Hammond, a professor of education at Stanford cited in [2] said "In 1970 the top three skills required by the Fortune 500 were the three Rs: reading, writing, and arithmetic. In 1999 the top three skills in demand were teamwork, problem-solving, and interpersonal skills. We need schools that are developing these skills." A development that I feel we have much more to learn about here at NTNU.

I remember my first years of Mechanical Engineering very clearly. It was a rough time for me; new school, new friends, new courses. It was hard and I struggled to find groups of friends for which I felt comfortable working with. It seemed as if everyone was stressed out because of the daunting new workload and the peer pressure to succeed. At first I wasn't able to find anybody at all to study with and I scavenged from table to table, study-hall-to-study-hall in hope to find some friends for which I could connect. It was lonely. I didn't know what type of study group I was looking for, but I did know that I hadn't found it. It just didn't feel right.

It wasn't until one day that stumbled upon a different group of guys than I usually hang around with. I asked them if I could join their table; for after all, we had to get

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[1] These opening paragraphs were inspired by [1]   FUNDAEC, "A Discourse on Social Action," 2006.

some math done. Almost instantly I noticed a difference in the way these friends were working together compared to the other groups I had been to. I felt welcomed. The other groups I asked to join usually begrudgingly accepted my request, while the guys around this table; were happy to help. They would work one problem at a time, and would wait patiently till everyone in the group was able to complete the same problem before *even reading* the next question to make sure that everyone was onboard. While in the other groups that I been in the past, individuals would rush on to the next question even though I (or others) weren't done with the problem. I felt left out, although I realized that the others didn't intend to be hurtful or want me to feel left out; they just wanted to continue to finish the assignment as quickly as possible. But it still made me feel bad. I wasn't a part of the group. In situations like this my creativity and productivity would plummet. I felt stupid and in that state of mind, I wasn't able to catch up. If this type of excluding behavior persisted for a longer period of time it was very likely I wouldn't show up in that group again the next time I needed help. With this new group of guys however, I felt loved. I felt cared for and they were willing to help me. Looking back, I am still grateful towards them for letting me join their table and those same guys are some of my best friends till this day.

Ever since this initial exposure to working in groups I have been keenly interested in what characterizes a productive group of people working together. I knew that joy was huge part of being productive, for I had observed when we were enjoying ourselves, the work went a lot easier and we would be supportive of one another. However, in the groups where there was no joy, there was little support and the result we produced usually reflected the bad chemistry. I thought that at some point during my education these topics would be addressed in a course, for I found this topic to be extremely crucial to understanding productivity. But to my surprise, it never was.

After a while as continued my studies realized, that I wasn't the only one that struggled with these issues. Lots of other students shared my view of feeling down hearted and at times had little hope. Even professors have trouble with their relationships and whispers of backbiting in hallways and angry emails are not a rare occurrence. Yet, how to manage these emotions and how to understand relationships, are entirely left to the individual to figure out on his own. That is of course, if he finds the topic of managing one's emotions valuable enough to take the time to learn about it. I attended a course in Bhutan given by Prof G. P. Bagaria from Indian Institute of Technology (IIT) Kanpur and he asked the class: Is the cause of your problems in your life due to lack of physical facilities or due to lack of good quality relationships? Everyone answered: relationships (even in a poor country like Bhutan). He followed up this question by asking: How much time do you spend preparing for attaining physical facilities compared to preparing for relationships? The class was silent. Its was obvious, we focus more on preparing for our jobs, studies, buying a car, a house, a bike etc. and think that somehow if we get all that in order, our relationships will magically sort themselves out.

An analogy that I heard along they way may help us understand this point more clearly: when we see a house with a beautiful garden we say 'oh, what a lovely garden! The owners must put so much energy and effort into maintaining it.' While when we see a happily married couple we say: 'oh how *lucky* they are!' As if luck was the root cause of having a happy marriage. When we look at this rationally it becomes obvious that the healthy marriage has more to do with the conscious effort applied to the relationship rather than luck. The energy applied to maintaining our relationships— just like maintaining a garden— is what makes it beautiful. This same analogy applies to innovative climates. They rarely happen by accident for it requires conscious, continuous, maintained effort and understanding for it to be beautiful.

I decided that I would dedicate my thesis to this topic in hope that future engineering students don't have search through as many tables as I did before they find the innovative climate they are looking for. I will try to disclose a model or a principle that we can learn about in order to help us understand the basics to a conceptual framework for why we are/are not participating constructively to the innovative climate around us. I will attempt to disclose a possible method for how to increase our resilience in order to uphold this model/principle in our daily lives. Finally, I will make an effort to dive deeper into the ideas that lie behind this model by taking a look at human values in order for us to get a more thorough understanding of these concepts. All of this I hope will contribute to answering my research question: Is it possible to provide engineering students with a tool for them stay 'out of the box' (or know how to get out of the box), in order for them to contribute positively to one's innovative climates? My hope is that the ideas presented will contribute to student's autonomy, authenticity and wellbeing during their studies and careers.

Let's start by looking at innovation and what some sources say about the importance of managing relationships in the innovation process.

LET'S INNOVATE…

WHAT IS INNOVATION AND WHY IS IT IMPORTANT?

Innovation, creativity and change are terms that every product developer has to stop to think about at some point in their education. Each one of these terms is described in great depth in the literature and are individual fields of their own. Popular definitions of creativity are often heard to be "… the emergence in action of a novel relational product, grown out of the uniqueness of the individual on the one hand, and the material, events, people or circumstances of his life on the other" as C. Rogers (1954) puts it cited in [3, p. 10]. T. M. Amabile (1983) defines creativity "as the production of novel and appropriate ideas by one individual or a small group working together" cited in [3, p. 10]. To "Create" is defined as "bring into existence, give rise to"; while to "innovate" is "bring in novelties, make changes" in The Oxford English Dictionary, also cited in [3, p. 10].

"Another useful way of distinguishing the concept is to see creativity as the ideation component of innovation and innovation as encompassing both the proposal and applications of the new ideas."[3, p. 10] Generally speaking creativity is often thought of something that happens cognitively within a person while innovation is a social process where particular elements in this process have an effect between people.[3, p. 11] "Innovation… involves bringing something new into widespread use, not just inventing it."[4, p. 130] "Innovation is the transformation of the seeds of invention into a solution valued above every existing alternative."[5, p. 78] "Creativity refers to the generation of novel ideas- innovation to make money with them. Creativity is the starting point for any innovation: in many cases, a solitary process, conjuring up the image of an eccentric scientist buried under mounds of papers, or of an artist surrounded by half-finished canvases and multicolored palettes. Innovation is the hard work that follows idea conceptions and usually involves the labor of many people with varied, yet complementary, skills. The challenge is to transform creative ideas into tangible products or processes that will improve customer services, cut cots and/or generates new earning for an organization. Simply put: Innovation = conception + invention + exploitation" [6] cited in [3, p.252].

Furthermore, innovation does imply something changing, however not all organizational change is considered innovation. Unintentional change like shift of work routines due to extreme weather conditions, or laying off people in off-season is not innovation. Nothing *new* has happened per say, but it is rather a routine restructuring due to internal or external environmental conditions and thus is considered organizational change.[3, p. 10]

For organizations to stay afloat it is obvious that creativity, innovation and change are some of the fundamental pillars within the organization. A statement by an Australian Government website sited in [4, p. 5] says frankly "Companies that do not invest in innovation put their future at risk. Their business is unlikely to prosper, and they are unlikely to be able to compete if the do not seek innovative solutions to emerging problems." Statistics Canada provide the following as determining factors for successful small- and medium-sized enterprises cited in [4, p. 5]:

- "Innovation is consistently found to be the most important characteristic associated with success.
- Innovative enterprises typically achieve stronger growth or are more successful that those that do not innovate.
- Enterprises that gain market share and increasing profitability are those that are innovative."

Based on these statements we can see that innovation is something important for business, and it is likely to stay that way in the future. In order to be head of the game, innovators have to be constantly on the look out for new solutions and pressing the limits for what was previously thought to be the norm. A quote by Richard Branson cited in [4, p. 15] says that "An innovative business is one that lives and breathes "outside the box". It is not just good ideas, it is a combination of good ideas, motivated staff and an instinctive understanding of what your customer wants." Which shows the level of commitment necessary to be considered a leading company in today's market.

SOME STORIES

A famous story that is often cited when it comes to innovation and creativity is the story of 3M. Where accidents in the lab combined with the insights of others can create an extremely practical product:

"Consider the case of Arthur Fry, an engineer at 3M in the paper products division. In the winter of 1974, Mr. Fry attended a presentation by Sheldon Silver, an engineer working on adhesives. Mr. Silver had developed an extremely weak glue, a paste so feeble it could barely hold two pieces of paper together. Like everyone else in the room, Mr. Fry patiently listened to the presentation and then failed to come up with any practical applications for the compound. What good, after all, is a glue that doesn't stick?

On a frigid Sunday morning, however, the paste would re-enter Mr. Fry's thoughts, albeit in a rather unlikely context. He sang in the church choir and liked to put little pieces of paper in the hymnal to mark the songs he was supposed to sing. Unfortunately, the little pieces of paper often fell out, forcing Mr. Fry to spend the service frantically thumbing through the book, looking for the right page. It seemed like an unfixable problem, one of those ordinary hassles that we're forced to live with.

But then, during a particularly tedious sermon, Mr. Fry had an epiphany. He suddenly realized how he might make use of that weak glue: It could be applied to paper to create a reusable bookmark! Because the adhesive was barely sticky, it would adhere to the page but wouldn't tear it when removed. That revelation in the church would eventually result in one of the most widely used office products in the world: the Post-it Note."[7]

Another classic example of the taking someone else's invention but innovating it into something better is the story of Apple's IPod. The first digital MP3 player was actually released in 1998 by Saehan, it was called the Saehan MPMan. But who has ever heard of that? Around the same time Compaq was playing with the idea of having hard drive based player that would allow 6 GB storage space in comparison to the 32 MB flash RAM based players that were presently on the market. However, Compaq's management didn't give the project a 'go' because at the time, the user interface on the portable players made it difficult to navigate through even 32 MB of songs, not to mention 6 GB, so they didn't think it would appeal to the public. Apple instead rose to the challenge released their hard drive based IPod in the fall of 2001. But it didn't stop there, it wasn't until Apple actually introduced iTunes (also for Windows) at the end of 2003 that the product really took hold giving users a scroll wheel interface, a new improved navigation system and a software that allowed the user to quickly upload and download songs from the computer. Thus opening up a whole new enterprise for buying music, which put Apple at the head of the electronic industry.[5]

THE PROCESS OF INNOVATION

Generally speaking a product or service goes through many stages before it hits the market, from the very start of an idea or assessed market opportunity, to the to the commercialization of the product and it hits the floor.
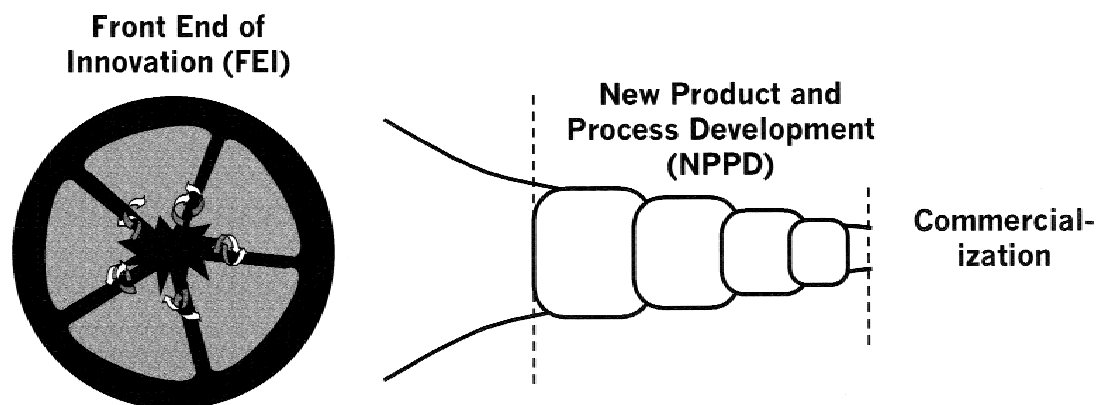
FIGURE 1 INNOVATION PROCESS DIVIDED INTO THREE PARTS[8].

Although every stage throughout the process of introducing a new product needs dedicated attention, it is often the beginning that is referred to as the most obscure, for at that point you don't know all the variables involved with how the product will turn out, and how the market will accept it. This is why it is often called the Fuzzy Front End (FFE) a term coined by Donald G. Reinertsen in the mid-1980s. Learning how to manage this process has been a topic of great concern for product developers for they have noticed that it "presents one of the greatest opportunities for improving the overall innovation process."[8]

Front End Innovation (FEI) is another name for the FFE and consist of generally five elements (Opportunity Identification, Opportunity Analysis, Idea Genesis, Idea Selection, Concept and Technology Development) that all work together according to the model presented by [8]. The driving force for these elements are the leadership and culture of the organization. From here the product enters a new stage where it goes on into the New Product and Process Development (NPPD). There are many models that describe the NPPD part of the process and they are more developed than the "fuzzy front end", for at this stage your have something concrete to work with. You have decided on a product and you want and you continue to make it a reality and put it into production. As seen in the figure above, that FEI section is round to illustrate that the elements within the FEI process are expected to flow and iterate between all the different elements, while the NPPD is series of well structured, chronological and sequential steps.[8]

THE CHALLENGE OF MANAGING INNOVATION

"Understanding how to manage people so that they continuously achieve creative thinking and turn it into innovations is fundamental to the continued progress of science and society itself"[9] cited in [3, p. 120]. How to create this buzzing creative yet effective atmosphere within an innovative business is an art and is no easy task. As Cooper points out when talking about managing front end development: "Today's complex projects require a multitude of technical and people skills to be an effective, well -rounded team leader or player. Some of these skills include, for example:

- How to undertake the needed market studies (user needs analysis, competitive analysis, concept testing, segmentation and market analysis, etc.).
- How to do the up-front homework, build a business case and undertake a business and financial analysis.
- How to design an effective launch plan – both operations and marketing.
- How to run projects – project management tools and techniques; project planning.

- How to deal with joint venture or alliance partners (including the legal side).
- Knowledge of the technology required to design, develop and produce the product.
- How to lead an effective cross-functional team – conflict resolution, communication, etc.

The required skill set is a daunting one, suggesting a Renaissance man or woman at the helm of the project. But such all-seeing, all-knowing people are few and far between."[10] It is obvious that to live up to such a list of requirements for a team leader, is going to be challenging as he continues to comment "But they are too often freshly minted MBAs- self-assured and articulate, but lacking depth, wisdom and experience."[10]

Furthermore, in order to get a CEO onboard with a new innovation model is yet another challenge. "They are content with the current one and want everyone in the organization focused on how to improve its performance."[11] Employees within a company are scared of taking part in new projects in case they do not succeed, and cannot find the courage to try out new things. "Organizations fail at business model innovation because they shoot their renegades. If they don't shoot them they wear them down until they leave. Business model innovators go against the corporate grain. They see entirely new ways to create, deliver and capture value. Organizations must learn to celebrate and support people within the organization who are willing to challenge the status quo, to bring totally different perspectives on delivering value to the table and are willing to take experimental risks to explore new models."[11] With this we can see that the atmosphere and culture within an organization is what ultimately what allows for creativity and productivity to flourish.

CULTURE

In order to have a business that lives and breathes "out of the box" as Richard Branson puts it, the relationships between individuals in a organization is critical for its ability to rise to the tasks that are required of them. Due to the increasing complexity of assignments, employees have to work in teams in order to be able to draw from everyone's capacity and insights within different fields. Research done on high performance teams show that good teamwork rarely happens by accident.[4, p. 124] Yet "teams[2] are one of the basic building blocks of every organization. After individuals, they may be considered the most important resource in any organization. Teams conduct so much real, day-to-day work within organizations."[4, p. 125]

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[2] Team here is defined as: "a group that must collaborate in their professional work in some enterprise or on some assignment and share accountability or responsibility for obtaining results."[4]J. Tidd and J. Bessant, *Managing innovation: integrating technological, market and organizational change*: Wiley. com, 2009.

Therefore getting people to work together in unity is an extremely valuable trait. However being able to change an organizations culture to become more unified is not an easy task for management. "Culture is a complex concept, but it basically equates to the pattern of shared values, beliefs and agreed norms which shape behavior— in other words, it is 'the way we do things around here' in any organization."[4, p. 131] "Culture refers to the deeper and more enduring values, norms and beliefs within the organization."[4, p. 137] In order to be able to change this, one has to really dig deep and understand how the individuals in the organization attribute value to their work and to their life.

An example of differences between Japanese and American culture can be seen as follows: "The mood in American industry today is highly analytical. There is the tendency to look for quick formulas, for ways to maximize efficiency…(and) to view employees in a depersonalized way. Often employees are moved around in an organization with the same consideration that one would have for a table or chair…

However, what makes the innovation process work is a truly personalized interaction between facilitators and the cast of innovation players. Not everyone can play the role of a facilitator, who like 'the invisible man', helps to make things happen. This personalized process aims at releasing human potential in a ways that will benefit the cooperation.

In this regard, we can take a lesson from Japanese corporations. It appears that due to the history and cultural values of Japan, it is easier for the Japanese to suppress their 'egos', focusing instead on the greater good. Transforming an idea into reality therefore becomes less of a problem as individuals are less likely to pose barriers. But they will instead, 'fall in line' to move an innovation ahead. The difficulty for Japanese cooperation's is the front end of the innovation process. Their devotion to the group makes it less likely that they will think in creative ways that are tangential to, or radically different from, those of the group.

The problems facing American Industry are the opposite and are likewise steeped in our culture. Americans have many creative ideas and find it easier to think tangentially. We have a cultural attachment to images of the 'rugged individuals' and the 'sharp shooters of the old west'. Therefore, we find it difficult to 'line up' behind a common cause. The result is that in a large American industry, 'egos' and 'politics' frequently get in the way and often are the rate-limiting steps to innovation and growth of new business opportunities.

One of the positive manifestations of the American 'free spirit' is entrepreneurial behavior. The Japanese demonstrate unified action. The task, therefore, is to merge the Eastern and Western processes in to a new paradigm that will unleash the creative potential and 'free up' innovative activities while focusing on unified goals of the organization"[6] cited in [3, p. 262-263].

From this statement we can see that there are positive traits with both cultures, but in order to create a new "paradigm that will unleash the creative potential" we need to merge the "Eastern and Western" processes. We need to find the beneficial values of both systems and combine them into one, thus creating entirely new culture all together.

CLIMATE

In contrast to culture, an organizational climate is more observable and at the surface of what can be seen in the environment in an organization. Climate is the "recurring patterns of behavior, attitude's and feelings that characterize life in the organization."[4, p. 137] For an individual alone, this is called the psychological climate and has to do with how the individual feels and behaves within the organization. While if one extends this boundary to include the others in organization at large, one can speak of the organizational climate. This climate is the set of objective perceptions that characterize employee's collective behaviors. The organizational climate is more susceptible to change when compared to the culture of an organization and is where improving efforts can have a more visible effect.

Unfortunately it is often that many "organizations fall into the trap of prescribing behavior using a series of bland and ultimately meaningless value statements. "Integrity, "Passion", "Customer First" shout the poster in reception, but they don't translate to action." says Matt Kingdom chairman of an innovation consultancy ?What If! cited in [4, p. 134]. Kingdon continues to say that the most effective way to change behavior is to share stories. When people understand a story, they will be able to relate it to their current situation and thus begin to adapt their behavior. Stories that involve how some companies failed and some companies prospered are very valuable to an individual. However one has to bear in mind that no two situations are alike and at the end of the day, one has to be able to make value judgments for themselves. One has to have the ability to see what principle lies behind the story, and then try to apply that to the existing situation.

For example R. Kanter cited in [4, p. 131] lists some innovation stifling factors that have to do with one's environment:

- "Dominance of restrictive vertical relationships
- Poor lateral communications
- Limited tools and resources
- Top-down dictates
- Formal, restricted vehicles for change
- Reinforcing a culture of inferiority…
- Unfocused innovative activity
- Unsupporting accounting practices"

An experienced manager could find a story that was relevant for each of these points, express them to the organization and in the process making clear what principle was applied (or not applied) in the story. In result the individuals could return to work with broader insights on each theme. A dominant principle that I find is lacking in Kanter's list is the ability to communicate and to have authentic human relationships within the organization. In virtually every one of these bullet points there is relational problems between the individuals.

CLIMATE FACTORS THAT INFLUENCE INNOVATION

There are many factors that influence innovation but I will list some of the most critical found in [4, p. 138-148].

TRUST AND OPENNESS

'Trust and openness' is one of the most important factors influencing innovative environments. In order for individuals to feel emotionally safe within one's work group, one has to be able to trust the people involved. If there is trust, then one can openly share one's ideas and opinions without the fear of being ridiculed. With high levels of trust, than communication is open and straightforward. "Trust can make decision making more efficient as it allows positive assumptions and expectations to be made about competence, motives, and intentions, and thereby economizes on cognitive resources and information processing."[4, p. 138] However, if trust is missing one can expect setbacks. One may hold back recourses that would be helpful for others in the organization or may not share ideas for one is scared that they may be stolen. "Fear of idea's theft, lack of time, or lack of incentives may also be deterrent to the idea originator. We inadvertently tend to reinforce individuals for keeping their ideas to themselves. Often, the risk of sharing is far greater than keeping an idea to oneself. When stepping forth with an idea, and individual may open himself up to personal rejection. 'I don´t care how good the idea is, I don't like you and won't give it the time of day.' Such statements are not explicitly stated to the idea originator, but frequently surface behind closed doors"[6] cited in [3, p. 255].

SUPPORT AND SPACE

'Support and space for ideas' is another crucial factor for innovative environments. "Idea time is the amount of time people can (and do) use for elaborating new ideas."[4, p. 140] In a situation where one has high-idea time, one can discuss ideas and impulses that are not planned or included in the task assignment. However, if every minute is prearranged and specified, time for thinking outside the plans or routines is not possible. If there is no time, it is very hard to be creative. "By its very nature innovation needs a lot of white space around it, it needs a lot of unscheduled

time because you just never know where an idea is going or how much time you need to put behind it; so if you diary is absolutely jam-packed with things to do you'll never be able to innovate and never be able to be truly creative" says Matt Kingdon cited in [4, p. 136]. Einstein really drives this point home with his statement "Creativity is the residue of time wasted."[7]

Furthermore, if there is not enough time to think about new ideas, than one becomes very concerned with one's current tasks and projects. Unhealthy levels of stress can begin to develop within individuals and they can begin to view professional training and development programs as obstacles for them to be able to finish their daily tasks. Management may not accept new ideas for that will dissipate concentration on the more day-to-day projects that are presently running in the organization. "If an idea originator takes the idea to management prematurely, he or she may get little action. Many managers are chronically overextended and may view a new idea as an annoyance or at best, a distraction that interferes with assigned objectives" [6] cited in [3, p. 255].

On the other hand too much time may lead to boredom or inefficiency. There are too many ideas that are being processed and managers are not able to narrow down on a focus. Thus due to the long idea evaluation process, the short-term projects and tasks are not completed sufficiently. In conclusion, there seems to be balance between giving space on the one hand, and still holding a demand of efficiency on the other that can drive innovation and creativity. A concept called organizational slack was developed in order to recognize the difference between the total resources available and the recourses needed in an organization. When there is not a need for change in response to the environment, the organization can focus primarily on productivity. However, if a response due to the changes in the environment *is* necessary, the slack in the organization can act as a dynamic shock absorber and shift some of its recourses to allow for experimentation and new solutions. Too much organizational slack denotes a static inefficiency. If the organization is successful the slack allows for recourses to occupy themselves with innovative pursuits. In less successful organizations or a fall in performance, the organizations tend to look at specific problems or solutions and thus reduce the slack. Some slack is necessary and needed for long-term innovation and growth. If the companies get to preoccupied with trying to find quick fixes to their immediate problems it is likely that they will not have the degree of innovation necessary to adapt to the fluctuating requirements of the environment.[4, p. 143] "Innovating in crisis often means that the main motivator is going to be fear. Fear does not serve as an effective motivator for innovation."[5, p. 111]

If the organization has a supportive climate, ideas are encouraged and listened to in a kind and caring way, and the atmosphere is positive and constructive. In an organization where support is low, ideas are often shot down, refuted with counter-arguments, and thus employees keep their ideas to themselves. "We tend to 'turn each other off' very readily with a casual phrase or sneer. An idea or an invention,

however, is like someone's child. The use of a 'killer phrase' such as 'Well, if that's such a great idea, why hasn't someone else don't it?' is like telling a parent that their child has no talent" [6] cited in [3, p. 255], which is a horrible feeling for a fellow employee to have.

There may also develop an attitude, based on passed experience, where people don't believe that any of these ideas are going to become realized anyways. If that is the case, it may be a good idea re-launch the suggestion system with a series of case studies showing what has been suggested and how it has been implemented and why, in order to regain the trust of the employees. Without appropriate support for new ideas, potential innovators grow frustrated: 'if the speak out too loudly, resentment builds towards them; if they play by the rules and remain silent, resentment builds inside them."[4, p. 143] In cases where there is too much idea support there may be too much deferring of judgment and people are working in different directions. Not appropriate judgment is being exerted and in result nothing is getting done. People maybe being 'too open' in order to avoid conflict, but a more balanced evaluation process needs to be applied for conclusions to be drawn.[4, p. 143]

"Additionally, if the idea is extremely complex or tangential to a managers assigned work, he may simply not know what to do with it. Many organizations fail to disclose the corporate mission, strategy, and business objectives to their employees, fearing that knowledge of this would provide the competition with an advantage. A consequence of this approach is that many mangers within one division will not know what is important to another division, as well as the overall cooperation. It is, therefore, unreasonable to expect the first-line or even middle management would necessarily have the perspective or information needed to deal effectively with all ideas that are brought to their attention" [6] cited in [3, p. 255].

CONFLICT AND DEBATE

'Conflict and debate' also has large implication on the organizational climate. Conflict "refers to the presence of personal, interpersonal or emotional tension… all organizations have some level of personal tension."[4, p. 143] Tasks, processes or relationships can be the cause of conflicts. Task conflicts are the conflicts that are related to 'what?' needs to be done, the content of work and the goals. Process conflicts are the conflicts that involve the 'how?' things get done— methods and means. And the relationship conflicts are the emotional interpersonal conflicts that generally express themselves through for example anger or hostility. Generally speaking, task and process conflicts can be constructive for they bring forth different perspectives, alternative solutions and may help avoid 'groupthink'. If these conflicting ideas are to be constructive however, they have to be presented in a manner that promotes a climate that is positive and open. Thus allowing for collaborative consultation. If this does not happen, the task and process conflict can quickly become

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a relationship conflict that "is generally energy sapping and destructive, as emotional disagreements create anxiety and hostility."[4]

Backbiting, information hoarding, gossip, lying about one's real needs, plots and traps are often signs of an organization with high relational conflict. In these cases key individuals or departments need to be taken aside and cooperation and agreement on values needs to be established. On the other hand, if conflict is too low, than deadlines may not be met and employees may be uninterested in their tasks. It may be necessary to find better-suited leaders in the company that have the skills to motivate people and increase the employee's activity. From this perspective the presence of some conflict is not necessary a bad thing. There needs to be relative amount of constructive conflict so that new styles of creative problem solving can develop from the diversity in a group. "If the level of conflict is constructive, people behave in a more mature manner. They have psychological insight and exercise more control over their impulses and emotions."[4, p. 144]

Debate focuses more on the ideas and issues in an organization in contrast to the conflicts that have more to do with relationships and people. In the clashing of ideas new perspectives and solutions can be found and new insight can evolve. When the debate score is high the diversity of peoples experiences, knowledge and viewpoints can be openly shared and people feel comfortable putting forth their ideas. While if debate is low, then you may find people complaining and moaning about the manner in which things are done in the organization rather than constructive ideas for solving the problem. There are more one-to-one conversations in hallways etc. in contrast to having open debates involving more people across hierarchical structures. In organizations like this, it is common that people do not want to engage in conversations concerning new concepts, thoughts or ideas for fear of the reaction one may be met with. This is largely due to the negative experiences of sharing such ideas in the past. Thus introducing a new rationale for one's behavior during debate may be necessary and to *show* this new rationale to the employees by modeling the behavior.[4, p. 144]

In situations where there is too much debate, there may be more emphasis on talking rather than implementation. People may be uncritically sharing their ideas and not concerned with the impact of their statements and one can see a trend of having individualistic goals rather than focusing on collective consensus and action. "One reason for this may be too much diversity or people holding very different value systems. In these situation it may be helpful to hold structured or facilitated discussions and affirm commonly held values."[4, p. 144]

FREEDOM

"Freedom is described as the independence in behavior exerted by the people in the organization."[4, p. 146] In organizations that have climates that allow a lot of

freedom, the employees are given the autonomy to make their own decisions. The employees themselves take the initiative to plan, share and acquire information about their work. In organizations where there is little freedom, the employees work by strict and structured roles and guidelines. Their work is carried out in prescribed ways with little room for flexibility in their way of performing their tasks.

In low freedom situations, people may show little interest contributing to new ways of doing things. People may be draining all their time and energy making sure that they are doing things 'by the book' or in the specific way in which they are told to do. This atmosphere may hold them back from taking the initiative to suggest new ways of doing things that may be fruitful for the organization. Maybe the leadership practices are overly bureaucratic and authoritarian and they do not have the energy or courage to think of alternatives or give suggestions. Feedback loops with coaching may be a way to improve this trend.[4, p. 147] Leifer and Steinert, when talking about creative climates, say "we advise to introduce a maximum of flexibility and to reduce inertia by removing barriers to change such as established policies and protocol. Change as we see it implies an attempting to create something new, perhaps radically new. This requires freedom, space, organizational and institutional as well as procedural freedom and the support of the organization to actually break through the boundaries of the established knowledge."[12]

On the other hand if people have too much freedom than people may be going in many different independent directions and thus not balanced with the work group or organization. They may be showing little or no concern to important policies or procedures and doing things differently each time they perform a task. The procedures may be too hard to follow and they do not how to follow them, or people are simply not complying with the procedures and need more support. A possible remedy may be to reward process and manual improvements, and a more open flow of communications to share best practices in order to tighten up the situation.[4, p. 148]

TOWARDS CHANGE

In order see new solutions to our challenges we may have to break free from today's established knowledge or possibly be more creative in applying established knowledge in new ways. For we all know, that for our future to be different from our past, something has to change in the present. We need to look at new ways of doing things. This of course requires lots of courage to step outside the boundaries for what is considered normal. It seems "in order to facilitate change, we have to let change happen. We have to remove institutional and procedural barriers, create a maximal of flexibility and support divergent activities."[12] We can't expect to see change if we try to force it. We need to allow the freedom for it to develop and appear on its own. We have to "let change happen" and not think that we can compel it by applying

impersonally strict rules, surrounded by negative emotions, unhappy faces, desperate deadlines etc. and hope that something spontaneously beautiful is going to come out of it.

The innovation process involves a whole range of interpersonal relationships and is dependent on the individuals involved. "Apart from the pure psychology of the creative act itself much creativity takes place in social contexts. And the application of creative acts in the world itself (innovation) almost always involves social collaboration and influence" [9] cited in [3, p. 120]. Therefore the climate and culture is a crucial part of the innovation process. If we are to see an increase in the quality of our innovation in our organizations (or society at large), unity in our relationships is one of the biggest challenges in our path and should be one of our primary goals. This can be seen from an example from Liefer and Steinert, where based on analyzing group work using video observation (analyzing positive vs. negative body gestures, facial expressions, tone of voice and semantic contents of events over time and relating them to performance indicators and team satisfaction) they have seen that negative events often overwhelm positive ones. "This may escalate up to a pivoting point where the entire team interaction becomes irreversibly negatively loaded. At this stage it is hardly possible to innovate or collaborate creatively… If team dynamics develop into this negative direction and pivot, it is necessary to intervene or to change the organizational setup. Positive change cannot be ordered from above. Emotions between team members must be taken into consideration."[12]

"Climate is inevitably the result of how individual treat one another, and its change cannot be as easily dictated from the top as say, a change in budget allocation. Let us imagine the directive comes down from on high: 'Effective immediately, we will all treat one another with respect.' Despite the worthiness of the goal, it has little meaning"[13] cited in [3, p. 278]. But if this change cannot come from above, then it has to come from below. This means that the individuals involved need to have the knowledge and 'know how' to resolve the issue. They have to understand the processes of creating healthy climates and how to maintain unity. They have to know how to "treat one another". This seems to be one of the key issues concerning innovative climates and cultures and we recognize its value, however we do not stop up and try to address the problem directly. Human values is such a large subject, so we tend to say 'Yes, its really important and crucial for the innovation process, but let us stick to the more tangible part shall we?' As if it is impossible to agree on some universal values that applies to everyone.

"Individuals need to know what are the behaviors now that are getting in the way of creativity… Each employee needs to find the answer to 'How can I change my behavior to improve the climate for creativity?' It is at the individual level only that the climate can begin to change because it is founded on human values, and how house values are reflected in interpersonal behavior" [13] cited in [3, p. 278]. We know that "…the organization cannot make employees have intrinsic motivation, but it can set a climate that will help it emerge and engage with the work task. (The)

challenge is seeing to it that the work task given the employee is meaningful to *him* or *her*, that it engages the maximum personal interest and enjoyment of the employee. Freedom is giving the employee the maximum operational autonomy in deciding how to do his or her work. The supervisor should set a clear goal, then stay out of the way. The most difficult to attain, because it represent the biggest change from current practice, is encouragement for creativity. The word encouragement comes from the Latin word 'cor' (heart), and means 'to give heart'. This is the establishment of personal bonds between managers and subordinates in which the manager helps build the courage of the employees to take risk and bring forth their new ideas. Mistakes are accepted if the employee learns from them. The mangers motivation in encouraging the development of the subordinate is seeing that only by developing the individual can the organization be developed"[13] cited in [3, p. 282].

GIVERS, TAKERS AND MATCHERS

Adam Grant, a management professor at the University of Pennsylvania's Wharton School, just released a book called "Give and Take: A Revolutionary Approach to Success" this spring which in all sense of the word, is revolutionary. I recently read his article "Givers take all: The hidden dimension of corporate culture" and was so enthused by it that I wrote him an email to express my awe. I received an automated response within moments where it was written "Since the release of GIVE AND TAKE, thousands of emails have poured in from strangers asking for help and advice" and Grant is literally struggling to get back to everyone. His book is a best seller both in the Wall Street Journal and in the New York Times and this is definitely shaking up the foundations for the way management is being run in the cooperate world. Grant goes to the root of what is disrupting healthy climates and cultures in organizations today.

Grant argues that its *not* 'stable team membership', 'having a clear vision that is challenging and meaningful', 'right number of people', 'well defined roles and responsibilities', 'appropriate rewards', 'recognition', 'appropriate resources' or 'strong leadership' that are critical factors for what drives units effectiveness. No, but rather it is *how much the employees are willing to help each other without expecting anything in return* that defines it. In a series of studies that him and others have preformed, he shows that 'helping behavior' is a huge facilitator to organizational effectiveness. Indiana University's Phillip Podsakkoff presents evidence that show that helpful behavior improves effectiveness by (cited in [14]) :

- "Enabling employees to solve problems and get work done faster
- Enhancing team cohesion and coordination
- Ensuring team expertise is transferred from experienced to new employees
- Reducing variability in performance when some members are overloaded or distracted

- Establishing an environment in which customers and suppliers feel that their needs are the organizational top priority"

Grant says that after a decade of studying companies, there are very few that have cultures and norms that support helping and therefore cannot reap the benefits therefrom. He classifies the different cultures into three different categories: 'givers', 'takers' and 'matchers'. Giver cultures are cultures where employees help one another, share information, offer mentoring etc. without expecting anything in return (in other words, altruistically). At the other extreme we have taker cultures where "the norm is to get as much as possible from others while contributing less in return. Employees help only when they expect the personal benefits to exceed the costs, as opposed to when the organizational benefits outweigh the personal costs."[14]

However the majority of organizations fall somewhere in between and have matcher cultures. This is where the employees have an equal share of 'give' and 'take' and only help the employees that help them in return. This is of course more beneficial than taker cultures but they are "inefficient vehicles for exchange, as employees trade favors in closed loops."[14] Say your struggling with an issue that has to do with another division, but if you don't have a relationship with someone there, you may be out of luck. What we tend to do in situations like this is— seek out someone you already know and trust (regardless of their expertise) and ask them for help instead. In a giver culture where no one is holding a tally for how much everyone is helping one another, it would be more likely to feel comfortable in seeking out people that actually have expertise on the topic— rather than only going to people that you know of from before.

Of course its logical that giver cultures are more beneficial than takers, but the reason why it is so hard to have or maintain such a culture is because "all to often, leaders create structures that get in the way."[14] When companies value individual performance and set up competitions for rewards and promotions that make employees work against each other, the very structure of the organization goes against the attitude of giving. This puts employees in situations where it would be unwise for them to give help (or at least only in situations where they get an equal or more amount of help in return) for otherwise they are putting their own productivity at risk, possibly being exploited, or even jeopardize that someone may steal their ideas. By the very structure of the organization givers have the disadvantage and thus overtime people develop matcher or taker behaviors in order to protect themselves. Grant puts forth three possible solutions to change these cycles, namely facilitating help-seeking, recognizing and rewarding givers, and screening out takers.

HELP SEEKING

In order to have a well functioning giver culture, the employees have to have the courage to ask questions. "Yet many people are naturally reluctant to seek help. They

may think it's pointless, particularly in taker cultures. They also may fear burdening their colleagues, lack knowledge about who is willing and able to help, or be concerned about appearing vulnerable, incompetent, and dependent."[14] Some companies have overcome this by having 'reciprocity rings' developed by Humax Networks where employees gather in groups between ten and two dozen in 60-90 minute sessions. First to share personal issues, then opening the floor or professional issues. Each member of the group tries to apply their knowledge, recourses and connections to grant the request that are being proposed. And since they opened with personal issues, the people involved are more willing to share their professional issues, because they are less likely to be afraid anymore.

Other solutions could be like what Appletree Answers (a call-center provider) did in 2008. They were suffering from a 97 percent turnover rate due to back-to-back acquisitions and lost their sense of community. They wanted to see if they could turn things around and established a 'Dream On' program where employees are welcomed to make requests on one thing they wish could become a reality in their life, but didn't think they could achieve it by themselves. Shortly after, a secret committee began to make these requests happen. Everything from sending a severely ill husband to meet his favorite football stars, to a special birthday party for an employee's daughter. Following a 100 requests being granted, the culture changed and people began to feel that they weren't alone at work and that they knew where to go to find help. Six months after the Dream On program was implemented the turnover rate dropped to 33 percent and the company had their two most profitable quarters ever.[14]

Grant also makes it clear that it is important to maintain moderation in a giving culture. If one becomes too preoccupied with giving, one has no time to work. Thus certain initiatives and boundaries can be put into place like having 'quiet time' certain parts of the day where no requests can be made thus allowing everyone to be productive on their own task before going to help others. Other alternatives may be creating a designated helper role that solely concentrates on helping others in the workplace.

REWARDS

In order to inspire organizational cultures to become givers, one would think management could just begin to reward giving behavior and that would create giving cultures. However, in reality this isn't the case and is far subtler. "Evidence highlights the importance of keeping incentives small and spontaneous. If the rewards are too large and the giving-behavior necessary to earn them is too clearly scripted, some participants will game the system, and the focus on extrinsic rewards may undermine the intrinsic motivation to give, leading employees to provide help with the expectation of receiving."[14] In other words, stop giving unconditionally.

Nonetheless rewarding is an effective way for management to show their employees that giving is important. Some possible models to reward giving are for example to have a 'love letter' program. Where if an employee feels that a fellow collogue deserves some recognition he can send him a love letter that adds and average of $3 to his paycheck. These love letters are public for the rest of the company to see to inspire others to do the same. Other initiatives may be to nominate helpful colleagues for bonuses or recognition, or give the employees all an equal amount of tokens in which they distribute to award givers. These initiatives from management can inspire employees to turn the trend of giving from happening within closed loops or behind closed doors, to becoming more open and celebrated.

SCREENING

Grant proposes three valid and reliable ways to screen out takers from entering in and spoiling an atmosphere of giving. Firstly, takers often tend to claim credit for their work and they are liable to use pronouns such as 'I' and 'me' in appose to 'us' and 'we'. It may be a powerful tool for job interviewers to ask questions about previous successes and have an eye for self-glorifying statements. Doing so may make it easier to root out individuals with taker behaviors.

"Second, takers tend to follow a pattern of "kissing up, kicking down." When dealing with powerful people, they're often good fakers, coming across as charming and charismatic. But when interacting with peers and subordinates, they feel powerful, which leads them to let down their guard and reveal their true colors. Therefore, recommendations and references from colleagues and direct reports are likely to be more revealing than those from bosses."[14] Other initiatives such as observing personal behavior directly while working in teams is also growing popularity in order root out the 'fakers'.

Lastly, Grant points out that takers often badmouth and put down peers in order to come out on top. Takers are generally egocentric and they try to maintain a positive view of themselves with comments like "that costumer should have done their homework" or "he didn't deserve that promotion anyways". "They come to view antagonism as an appropriate, morally defensible response to threats, injustices, or opportunities to claim value at the expense of others."[14] In general, they are just not compassionate and genuinely helpful people to have around.

Grant closes by reminding us that in order to create and lead a giving culture it requires more than just seeking help, rewarding and screening out people. It is a behavior that has to be lived and led by example:

"In 1985, a film company facing financial pressure hired a new president. In an effort to cut costs, the president asked the two leaders of a division, Ed and Alvy, to conduct layoffs. Ed and Alvy resisted— eliminating employees would dilute the company's

value. The president issued an ultimatum: a list of names was due to him at nine o'clock the next morning.

When the president received the list, it contained two names: Ed and Alvy.

No layoffs were conducted, and a few months later Steve Jobs bought the division from Lucasfilm and started Pixar with Ed Catmull and Alvy Ray Smith.

Employees were grateful that "managers would put their own jobs on the line for the good of their teams," marvels Stanford's Robert Sutton, noting that even a quarter century later, this "still drives and inspires people at Pixar."[14]

HOW ALL THIS IS RELEVANT FOR US

Now we have looked at what some of the literature says about innovative climates and cultures. I have pointed out that a fundamental building block within having an effective unit and a creative atmosphere is strongly related to how we treat each other and ultimately bottoms out in human values. Although all the sources point out that this is an important factor to the process of creativity and innovation, they do not provide any further information of how to understand human values or how we should treat each other. Adam Grant points out that one major factor to productive corporate culture has to do to with altruistic giving. But becoming an altruistic giver with the flick of a switch— is very difficult. There are some principles that need to be understood first before one can consciously begin to give altruistically.

As far as I can see students have not been exposed to ways how to create healthy climates or learn how to give. We have been introduced to the idea that is important and everyone has experienced good and bad climates throughout their lives. However, we haven't really understood exactly why some climates are good and why some are bad. We all feel the difference between the two, however we can't seem to find a way to get it 'on demand' or how to correct it, if the atmosphere turns sour. After being part of NTNU environment throughout the course of my degree, I can state firmly that we are currently in a 'matchers' culture where the friends we know 'scratch our back, if we scratch theirs'. Generally speaking, acts of altruistic giving are very rare, not because we don't want to do it necessarily, but because isn't valued from the organization as a whole. The very structure of the school sets best friends (that work side-by-side throughout the school year) against each other on exam day, in hope for a legitimate spot on the bell curve. This in turn tends to create clicks with information hoarding where groups of friends will sit together and work, and not seek or offer help to anyone else. In extreme cases students may even degenerate into betrayal in order to come out on top, by 'forgetting' the book they were going to lend to a friend at home or backbiting in order to press somebody out of group because we don't want to help them after all. This is of course typical taker behavior, which we legitimize in hope of getting a better scorecard to seal the deal with the best

companies when we graduate. But if the future brings more screening methods similar to Adam Grant's, I think 'takers' and 'fakers' may be having a hard time finding a job and should have spent more time developing their character by giving.

The process from going from a taker to a giver is a big personal shift, which takes a lot of effort and cannot simply done overnight. This is a complete reassessment of how we should think, act and for what motive we should do anything at all. Could it be that what stimulates change or 'allowing change to happen' as Leifer and Steinert put can be solved if we become better at helping each other? That we all become givers? For I think that 'trust and openness', 'support and space', 'freedom' and 'encouragement', all these different necessities for creative climates, can be solved if we all learn how to give help and become givers. I think that giving can be seen as an umbrella term for all the other climate necessities, and if we satisfy altruistic giving, then all the other climate necessities will follow.

I have focused most of my energy on ways that may help facilitate a shift to becoming givers and I will present some of the knowledge that I was able to find along the way. My hope with presenting this is that it can pose a foundation for which one can start to develop a conceptual framework for engineering students to begin to describe their emotions and feelings to each other. I believe that this is a necessary step in the process to become givers for in order to give altruistically, one has to understand the principles that lay behind the act of giving. Through an understanding of this knowledge it is my hope that we can begin to observe our climates and have a more grounded understanding for what is necessary to be a positive contributor to it.

I will close this section with one last quotation from [13] cited in [3]. "Improving corporate climates for creativity is an important goal for our times. To achieve it, mangers awareness of the role of climate in organization must be raised and their skills for managing climate must be developed. Climate assessment interventions need to develop techniques that help department managers need to develop their understanding of how to facilitate climate change… and they *especially* need to learn how to encourage their employees, how to give them heart…. As a result of working towards these goals, managers can create healthier organizations, contributing to the positive development of humankind."

WHAT I CAME UP WITH

I started my research on trying to find a way for engineers to understand their innovative climates better by traveling to India. I was invited to Indian Institute of Technology (IIT) Madras to attend a pioneering course in Self-awareness that was created deliberately for engineers. The general purpose of the course "Self-Awareness GN 5001" was to allow the students to gain knowledge on how to deal with life's challenges. This would be accomplished by giving students the knowledge necessary to be able to 'step back' and become aware of oneself as they encounter demanding situations. With repeated focus and constant self-reflection one can gradually become better at stopping oneself from slipping into dysfunctional habits that undermine giving. The course also attempted to raise the students understanding of what lies behind human conflicts. Through the process of repeated reflection and self-observation, one can begin to take responsibility for one's actions, emotions and reactions, and (depending on the efforts made by the individual) can gradually begin to live in harmony with one's surroundings. By obtaining knowledge about self-awareness the students could begin to see a positive change in themselves, and begin to have a more conscious and deliberate (positive) influence on others as well.

An inspiring professor of civil engineering named Devdas Menon— that has a particular interest and understanding of this subject— ran the course. Menon used a two-hour power-point lecture format followed by a more informal one-hour session conducted outside under a banyan tree. As we went outside, Menon was joined by another engineer named Arul Dev who assisted in the consultations. The purpose of this outside session was to allow students to ask direct questions concerning personal problems and would ask the class for advice. After a question was raised we would together filter the question through the "Telos Model[3]" which would allow us to grasp what was at the core of the question in reference to the higher and lower nature of the human being. Once the core of the problem was articulated we could try and find a satisfying remedy to the problem. There were roughly 70 students (both auditing and crediting) in the class, where four of them were international students from the west, including me. This course gave me a good foundation for understanding what would be valuable to learn about for engineering students in Norway and how to help us become givers. I have included only parts of the curriculum in this thesis, although the course in its entirety was very inspiring.

After taking the course in IIT Madras I flew to Bhutan to attend a course at the Royal University of Bhutan in "Human Values and Professional Ethics" run by a professor in electrical engineering named G. P. Bagaria. The University was supplying this ten-day course for their Business Management Master students as well as a number of

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[3] More information about the Telos Model can be found at http://www.telos.org.in

Bhutanese politicians, national crime investigation agencies, and professors from all over Bhutan in order to support their Gross National Happiness (GNH) initiatives. I had heard about this course while I was in India, for there were about twenty-eight Universities particularly in the North of India that had been implementing this course in hope to improve the well-being and ethics of the students. Rumor has it, that due to the high suicide rate at Indian Universities, they decided that it was important to supply students with a course in human values. This course was an attempt to fill this void and there is a possibility that it may become mandatory at many Universities in India. I have tried to summarize what I found valuable from this course in A.4. The course has received very positive feedback from people that have been involved and I found certain aspects of the course insightful. However, I feel that its content and presentation would have to be altered significantly in order to suit to a Western audience and I discuss some reasons why in the appendix. Nonetheless, it did provide me with yet another experience for which I could base the rest of my findings and gave me insight into what other countries are doing for their university students to learn more about human values. I met with many people that were involved with think-tank's all over India, and professor's and politicians that were hoping to gain more insight on how they could implement more human values in their courses and dealings.

I have tried to categorize the literature and theories that I found throughout my research into three different categories. These three all contribute to a basic conceptual framework that we can use to teach engineering students that may help them become givers. Firstly I present a model or principle, which uses stories to help us understand and address our interpersonal challenges and start the process of making us aware of our hearts. Secondly, I will present a method that can help us increase our resilience and connect with our hearts more directly with the help of bio-feedback measurements. This will provide us with a method to consciously get in touch with our hearts in order for us to remain steadfast givers and a method for us to recharge if/when we loose our emotional balance. Finally, I take a look at human values from the mathematician William Hatcher, which I found to be most insightful in the research I performed on the topic and I have tried to summarize a way we can become more conscious of our value judgments in real time. I hope that by deepening on these subjects we will be able to understand more what it takes to become givers.

THE MODEL: THE BOX[4]

One of the main challenges we have as human beings is to maintain authentic relationships with each other. We all struggle to continuously keep both ourselves our co-workers, parents, friends, children etc. joyful throughout our daily lives. With all the stresses and strains of our everyday chores we seem to loose the tender touch needed for maintaining our relationships, and more often than not, we cannot figure out why we seem to be so uncomfortable around certain people or why they are so frustrated with us. The book "Leadership and Self-Deception" and "The Anatomy of PEACE" by the Arbinger Institute addresses this challenge in a simple but profound way. The books provide a way to recognize the problem and how to find a solution. The idea is that we have to recognize that we have a fault in our characters that needs to be consciously addressed in order for us to change and become givers. This faulty character, that reflects itself in our actions, can be best described by some examples from the book:

"Remember the time you had a chance to fill the car with gas before your wife took it, but then you decided she could fill it just as easily as you, so you took the car home empty?... Or the time you promised the kids a trip to the park but backed out at the last minute, on some feeble excuse, because something more appealing had come up?... Or the time under similar circumstances…when you took the kids where they wanted to go but made them feel guilty about it?... Or the time you parked in a handicapped-only parking zone and then faked a limp so that people wouldn't think you were a total jerk?... (H)ave you ever parked where you shouldn't but then run from the car with purpose to show that your errand was so important that you just had to park there?... Or have you ever let a coworker do something that you knew would get him into trouble when you easily could have warned or stopped him?"[15, p. 7-8]

All these examples are to help us understand what is at the core of many of our relationship problems, namely the concept of self-betrayal. It is when we have an inner intuitive feeling to do something towards someone (to give) but then we decide to go against that feeling. Similar to when we drop a piece of lettuce on the kitchen floor as we are making a sandwich and it would have been really easy for us to pick it up. However, instead push it under the counter with our toe to ensure the others in the household that you 'didn´t see it'.[16, p. 94] Similarly, when you are on your way to go up in an elevator and the doors are about to close as someone comes running

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[4] I owe the contents and ideas of this entire subchapter to the books "Leadership and Self-Deception, Getting out of the Box" and "The Anatomy of PEACE" by The Arbinger Institute. This is my interpretation and summary of some of the themes from those books. These sources were taught to me at the Self-awareness course at IIT Madras.

towards it. Instead of holding the door open, you watch in (some degree of) embarrassment as the door closes in front of their face.[15, p. 65]

These situations happen to all of us throughout the day, but we are usually not aware of them or the consequences that arise from continuously self-betraying ourselves. An analogy that the book [15, p. 17-20] uses in this regard is the story of Ignaz Semmelweis (1818-1865) who was a doctor that worked at Vienne's General Hospital. At this hospital they were experiencing a horrendous mortality rate in the maternity ward. Semmelweis was determined to understand what was the cause of all these mortalities, for Vienna General Hospital was gaining a bad reputation amongst the public. After a rigorous investigation he finally figured out that it had something to do with 'particles' from the cadavers and diseased patients being transferred to the healthy patients by the hands of the physicians. Once Semmelweis realized this, he instructed his staff to wash their hands with chlorine and the mortality rate fell from one in ten, to one in a hundred.

The doctors were completely blind to the fact that they were the ones causing the problem. This was of course because they had no understanding of what germs were and had no method for attaining a solution for what they called 'childbed fever'. However, Semmelweis' discovery was the beginning of the development of germ theory, which has been firmly established today. The reason why this analogy is relevant in this context is because we don't realize that *we ourselves* are actually the problem for our incapacity to maintain authentic relationships and have no method for changing. However, the book introduces a concept or model that may prove to be helpful in this regard and make us more aware of when we have self-betrayed. Namely, the moment I self-betray, I enter 'the box'. Once I have entered the box, there follows a series of characteristics that everyone tends to do that have immense implications on our relationships. One of the most noticeable traits is that we stop giving. In order to understand these characteristics and to understand the concepts, I will reiterate several stories that can be found in the books.

BABY CRYING STORY [15, p. 66-90]

Husband and wife are lying in bed sleeping. The husband's name is Bud, the wife's name is Nancy and they have a baby named David. In the middle of the night, the baby starts crying and Bud wakes up. His initial feeling is to get up and tend to the baby so that Nancy can sleep. At this point he has a choice to make; either to honor the feeling or to betray the feeling and slip into self-betrayal. Bud decides to betray the feeling (not to give help), and at this point he enters 'the box'. As he continues to lie still next to Nancy, he starts to justify his self-betrayal in his mind. Thoughts like "Why should I get up and tend to the baby? Nancy can do it. I have to get up early in the morning tomorrow." "Maybe she is awake too, and she's just faking it." Or "I have been working so hard lately, I don't deserve to get up and tend to David." He continues to find more and more arguments that justify his act of self-betrayal and

creates a whole narrative in his mind by blaming his betrayal on his wife until he is convinced that his choice was the right one.

However, in reality what he has done is exalted his own virtue and vilified his wife. He is thinking thoughts like he is a good husband, hardworking and sensitive and that he feels like a victim to the things that are happening to him. While his view of his wife becomes: she is lazy, inconsiderate, a faker, a lousy wife and a lousy mom etc. We can see that once he betrayed himself, he needed his wife to be vilified in order to justify his betrayal and used her faults to justify his behavior. He then began to exaggerate his fairness, the importance of sleep and obligations the following day. Which were not in his mind the moment the feeling of helping to tend to David struck him. Similarly, his view of his wife also began to be distorted after the fact that he self-betrayed himself. If he had honored the feeling, he would have never made up this story in his mind that his wife is a lazy and lousy wife and a bad mom.

Even if Nancy in reality is actually lazy or inconsiderate, she would become even more so in self-betrayal and this additional distortion is something that Bud is doing, not Nancy. Her faults only became relevant after the fact that Bud failed to help her and he needed to feel justified for his own indolence. In situations like this, these perverted thoughts are usually encouraged even more by validating feelings of anger or irritation that surely Bud was feeling as his mind was full of distorted thoughts of reality. Thus, even his feelings do not provide accurate information of the problem and only make things worse. For in the instant when the feeling to tend to David came to him, he didn't feel irritated or angry towards Nancy at all, that happened when he started the process of self-justification. It was as if in the moment he wanted to tend to David, he viewed Nancy as someone who needed help. However, after he fell into self-betrayal, he viewed her as someone not deserving of help.

Furthermore, if Bud continuously has these types of thoughts towards Nancy throughout his day, he will carry these same arguments of self-justification along with him and he will become gradually more adamant in his views. In other words he is 'in the box' and is carrying this box around with him. If then Nancy approaches Bud with the idea that he is insensitive or uncaring while Bud is completely immersed in his box, which justifies the opposite, it very unlikely that he will take her critic seriously. On the contrary he will fight back in order to defend his self-justifying image. When we carry around these self-justifying images like: I am important, hardworking, knowledgeable or any other good quality to have, and are not humble in our expression of this in our actions, we actually reflect the opposite virtue. We become cocky or defend ourselves when confronted with an opinion that is contrary to what our self-justifying image says. The box is blinding us from seeing that we are being hypocritical, we think we are sensitive to others feelings, but in fact we are only focusing on ourselves. A summary of this story can be found in diagram below.

Feeling: "Get up and tend to David so Nancy can Sleep"

Time

Choice

Honor it

Betray it i.e. "Self-betrayal"

How Bud started to see himself:
Victim
Hardworking
Important
Fair
Sensitive
Good Dad
Good Husband
Feelings:
Angry
Depressed
Bitter
Justified

How Bud started to see Nancy:
Lazy
Inconsiderate
Unappreciative
Insensitive
Faker
Lousy Mom
Lousy wife
How Bud Started to View the world:
Unjust
Unfair
Burdensome
Against Him

When I betray myself, I enter the box and become self-deceived:

1. Inflate others' faults
2. Inflate own virtue
3. Inflate the value of things that justify my self-betrayal
4. Blame

FIGURE 2 BED STORY DIAGRAM INSPIRED BY [15, P. 79, 16, P. 97]

With the help of this story we can see that we enter 'the box' when we betray ourselves and thus begin the process of self-justification and blame others for our betrayal. These justifications can create a hardened shell around our character and thus we cannot see that we were being perverted in our view of the world and thus become self-deceived. The reason why we often stay in 'the box' is because other people around us are in 'the box' as well, and their influence further justifies us in staying in 'the box'. We blame others for that what they are doing is unjust, and by doing so that justifies us. While our partner who receives this blame and feels that the blame is unjust, blames us for blaming them unjustly and then it all goes back to square one. This continual process of feeding off of each other's blameworthy character is called collusion.

COLLUSION STORY[15, p. 93-101]

The process of collusion can be understood by another story from the book. Kate has an eighteen-year-old son (Bryan) that is somewhat of a handful and has a bad habit for coming home late. This makes Kate feel that his son is disrespectful and inconsiderate towards her. So in response these feelings, she reckons that it is necessary for her to become strict and enforce discipline so that Bryan will change. This she does by criticizing him and hovering over his shoulder. On the receiving end of this dictatorial behavior, Bryan feels that Kate is intrusive, unloving and not showing any compassion. Thus prompting Bryan to come home late, which was the problem to begin with. Then this process repeats itself over and over.

Kate does not want Bryan to act the way he does, but she doesn't realize that she is provoking him to do so by her way of *being* toward him. This is of course is because

she is in 'the box' and therefore is seeing him as an object and not as a person. It would of course be logical for a parent to apply more discipline if a child is acting inappropriately, but the problem here is in what *way* Kate was applying it. In her way of *being* towards Bryan, and with this, she is obviously not thinking of his needs; she is just irritated with him for making her life difficult. Bryan on the other hand senses her hypocrisy and manipulative way of being towards him, and is thus further justified in his blaming toward his mother. He then becomes even more established in his box.

At this point, when both parties are in their respective boxes, they tend to collect allies that further support and justify their position. Kate will go and complain about Bryan to her husband and her girlfriends on the phone, who then agree (and enter their boxes) and they further support each others distorted perspective of reality. Meanwhile Bryan will go to his friends and complain about his mom, and thus get support and further validation for his views about his mother and so on. This of course can be extremely detrimental and is usually what happens within a company when departments or teams go against each other. They gang up on each other and further feed off of each other's blame. This can be illustrated in the collusion diagram below:
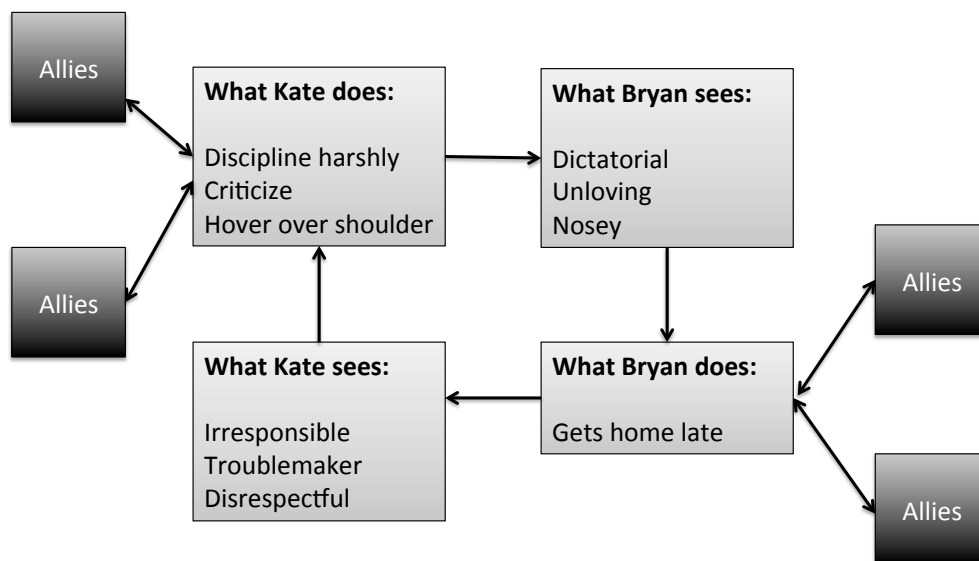
FIGURE 3 COLLUSION DIAGRAM INSPIRED BY [15, P. 95, 16, P. 65]

Continuing on the story, one Friday night in the middle of this dispute Bryan asked Kate if he could borrow the car. Kate didn't want him to borrow the car, so she gave him a ridiculously early curfew of 22:30 in hope that we would not accept the offer. Curiously enough, he accepted the terms and took off with the car. Meanwhile, the whole time he was gone, Kate was having a huge internal conflict with herself about how irresponsible Bryan was and was swearing to herself that she would never allow him to borrow the car again. A few hours later as she was sitting in the living room, convinced that he was going to come home late and continuously fussing over Bryan

in her mind and complaining about it to her husband (which agreed with her and was in his box), he showed up at 22:29. He came through the door with great excitement saying "I made it mom!" And to this, Kate was actually disappointed. As if she wanted him to come home late. This of course would have justified her for all of her negativity towards Bryan that she had narrated throughout the evening. Her response was therefore a sharp and uncompassionate "Well you sure were close." Which was not exactly a pat on the back and supportive response of "Good job!"

While she was sitting in her couch waiting for Bryan, all she seemed to want was a son that was trustworthy and responsible. However, when he did show trustworthy and responsible behavior she wasn't able to acknowledge it because she was so caught up in her box. While she is in the box she needs to feel justified and while she was spending the whole night blaming Bryan for being such a bad son, she needed him to be late in order for her to be right in blaming him. In other words she needed him to be wrong (blameworthy) in order for her to be right. In a paradoxical way, we need problems while were in 'the box' so that we can feel justified in our blaming others. We are self-deceived and cannot see the truth about ourselves or about others and continue complaining and thus provoking the same problems that we are criticizing. In a strange way (if we are not aware of this), no matter how much we complain about someone, when we receive information that further justifies our views, we find it strangely satisfying and get further into 'the box'.

Another important aspect to the box is that we can be in 'the box' towards some, but out of 'the box' towards others. This is often experienced when we are with our close friends in contrast to our parents, superiors, challenging neighbors, co-workers or other people we tend to get into conflict with. We have an out of 'the box' approach to our friends and have rather peaceful encounters with them, but when we are with our partners, wives, husbands, parents etc. we can often fall back into 'the box'.

These stories are analogous to the challenges we face at work or at school. If we were to exchange the feeling of "Tend to the baby so Nancy can sleep"[15, p. 66] from the baby crying story with "Do my best to help the company and the people within it achieve results"[15, p. 151] it would suddenly become a situation that is relevant for all employees of any company. This is usually the initial feeling that people have the day before they start a new job or during the job interview. However, after they start working for a while, suddenly they establish boxes towards some of their coworkers and gradually fall into blaming others for justification of their own self-betrayals. Examples of this is when people complain about the department down the hall, or we find people saying, "if only this colleague would improve his attitude, we would be better" etc. which may or may not be true. Of course individuals in a company should continuously be advancing and departments should increase the quality of their work, however this blaming from individuals is not because of the departments need to improve (which is an obvious fact), it is so the blamer can be justified in his personal shortcomings. He is viewing the people he is working with as objects in his way, rather than human beings doing the best they can.

The fact of the matter is when one is in 'the box' one is focusing on oneself and not the results that one produces or helping others. If a colleague gets promoted, or something of that nature, we are rarely as enthusiastic about it compared to if it was ourselves being promoted. We think we are interested in the results of the company, but in truth we are just hiding behind that idea and are more occupied with our own achievements while were in 'the box'. Being in 'the box' while working in a company has many destructive side effects. For example: "lack of commitment, lack of engagement, troublemaking, conflict, lack of motivation, stress, poor teamwork, backbiting/poor attitudes, misalignment, lack of trust, lack of accountability, communication problems"[15, p. 109] This is no way to lead or work in a company. If one is to be a leader one has to be out of 'the box' and thus help others get out of it.

The book introduces some things that don't work inside the box[15, p. 136]:

1. Trying to change others:

Trying to change others doesn't work because we are focused on their faults rather than our own. Other people have their own problems that they are dealing with, and it is a misconception on our part to think that *they* are the reason why we are in 'the box'. We think that *they* are the reason why were in 'the box', but that is not the truth, we are in 'the box' regardless if they have problems or not. If the neighbor has a problem, for instance that he hasn't painted his house in twenty years, and every time I see him I try to tell him about it (which usually ends up with both of us getting irritated). When he finally does paint his house, will that change my view of my neighbor or will I still be aggravated with him for some other reason? I might say new things to myself in order to blame him for my aggravation. For instance: "Well now he needs to fix his garden." And it obvious that his problems (i.e. his house upkeep situation) are not the cause for my aggravation, I am just finding faults in him because I am in 'the box', and while trying to get him to change we get into collusion and the problem continues. We provoke the same behavior that we are trying to change.

2. Doing my best to "cope" with others

It is very common to try to solve relationship problems by coping with each other. However, when we 'cope' with each other we are still emanating the hypocrisy that is present while being in 'the box' and this invites the other person to remain in his box as well. Thus, we have an undertone of negativity towards each other that is not being acknowledged directly so that the individuals can talk it out and find a solution. This 'coping' attitude can gradually build up and boil over at some later point in time and also does not contribute to an atmosphere of teamwork, creativity and productivity.

3. Leaving

When we are in 'the box', we think that it is the other people that are the problem and don't realize that the problem is actually within ourselves. Thus if we leave a challenging situation, we carry the problem along with us, and continue to walk

around with 'the box'. In situations like these, leaving is never the ultimate solution. We have to address the problem within ourselves directly and consciously, and only *then* can one get out of 'the box' and solve the relationship problem. If we leave and take the box along with us it is highly likely when we meet that person (or persons) again we will start off in 'the box' in our way of being towards them.

4. Communicating

Initially one would think that this would be the solution to how to get out of 'the box'. However, when communicating from in 'the box', we still emanate the blame underneath our views towards the other person. For example if we think back to the baby crying story, if Bud was to communicate to Nancy while he was in 'the box', it would be highly likely that he would communicate his negative views about Nancy. Although, he may be rather clever in his conveyance and not say things directly, however, she would still sense his subtle manipulation and lack of compassion towards her. Bud would still be communicating his blame and other negative attitudes from being in his box, and thus communicating would not solve the problem of getting out of 'the box.'

5. Implementing new skills or techniques

Communication and implementing skills or techniques go hand in hand. Skills training in nontechnical areas tend to have little lasting effect on people or employees because these new skills can either be implemented from inside or outside 'the box', which is the root of the problem. These new skills and technics usually provide people with more sophisticated ways of blaming each other rather than actually tending to underlying, deeper problem. This deeper problem is the act of self-betrayal, not *being* deprived of skills or technics used to communicate. Relationship problems seem insoluble world over because the skills and technics that are commonly used or taught are in *themselves* not solutions to the problem.

6. Changing my Behavior

To illustrate that changing one's behavior is not a solution for getting out of 'the box', I will share another example from the book[15, p. 31-40]. During boarding of an airplane that had free seating, Bud was happy to find a window seat towards that back of the plane. His seat had a vacant middle seat beside it and there were still many passengers trying to board the plane and were looking around for desirable seats as they walked down the aisle. Bud took out his newspaper to read and placed his briefcase in the middle seat. Bud would read the paper, however simultaneously he would be looking out of the corner of his eye at the passengers. The moment he noticed that a passenger was considering the empty seat beside him, he would spread the newspaper pages wider in order to make the seat seem as unlikable as possible.

If we were to sum up Buds outward behavior or what he was doing, it would be (amongst other things): sitting, watching the other passengers, reading the paper.

However, while he was outwardly doing these behaviors, he was also inwardly viewing the passengers as objects, as challenges in his way, as threats or nuisances to some degree or another. He was surely not occupied with the needs of the individuals who were trying to find a seat. In other words, he solely focused on himself and everyone else was secondary to him.

Later, on another airplane, Bud and his wife were trying to find a seat while boarding. This time the airline had made a mistake with their tickets, and they were not seated together. The flight attendant was struggling to find a way to place them, when suddenly a lady approached (with a hastily folded newspaper under her arm) from the back of the plane. She had noticed the complication and said that there was a vacant seat next to her and she would be happy to give her seat in exchange for one of theirs.

If we would compare these two situations together we could see that they were essentially doing the same thing. They were both sitting on the plane, with a vacant seat beside them, while reading the newspaper and viewing the passengers come onboard. However, what was going on internally between them was very different. The lady was viewing Bud and his wife not as objects, but as people that had hopes and wishes. The lady also was occupied with Bud and his wife's needs, and valued those about as much as her own. In the situation where Bud was sitting, he was feeling anxious, uptight and was minimizing others, blaming them, thinking one had too many carry ons, one was too happy, another too talkative etc. While this lady had none of these apparent negative emotions at all, she just noticed that there was somebody who needed a place to sit and she wanted to help. She didn't feel superior to any of the other people on the plane and viewed them as people that needed a place to sit that had comparable needs, hopes, fears and joys in their life. Bud was viewing the situation from a distorted perspective of reality, thinking that he was superior and that the others were not deserving of the seat beside him. The lady on the other hand, saw the situation clearly without bias and was therefore open to help provide a mutually satisfying solution. In other words Bud was in 'the box', while the lady was not. A summary of this situation can be seen in the diagram below.

Behaviors
- Sitting next to empty seat
- Observing other passengers
- Reading the paper

Way of Being

Out of the Box:
I see myself and others more or less as we are-as people.

In the Box:
I see myself and others as a systematically distorted way-as objects.
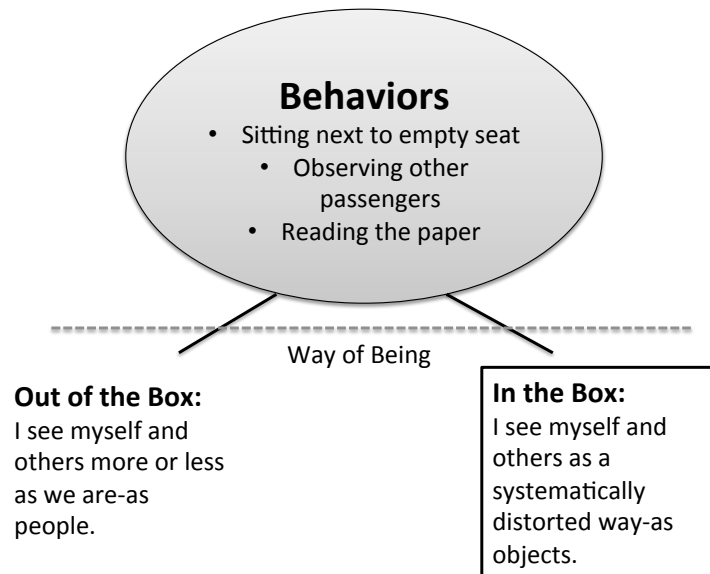
FIGURE 4 BEHAVIORS INSPIRED BY [15, P. 35, 16, P. 47]

The point here is that whatever one may be doing on the surface; either sitting, observing or reading the newspaper one can be doing it in one of two fundamental ways: either in 'the box' or out of 'the box'. When one is out of the box one sees people clearly as they are, similar to oneself and with desires, wishes, dreams, hopes etc. as legitimate as our own, or we do not view them as such and therefore are in 'the box'. "I experience myself as a person among people… (or) I experience myself as a person among objects."[15, p. 35] And thus if we change our behavior that will just be a change within 'the box' and everyone will still remain as objects to us. We can go from having a heated argument to suddenly giving up and exclaiming "I'm sorry, it is my fault." Which if the individual doesn't actually *mean* what he is saying, and has gotten out of 'the box'; he is still in 'the box' viewing the people around him as objects and they will detect his deceit while he is supposedly apologizing.

To be out of the 'the box' is therefore something deeper than a behavior, and there is no behavior or something you can *do* to get out of 'the box'. For anything one can do, can be done from either inside or outside 'the box'. The solution to getting out of 'the box' is far subtler than a behavior or an action, its something deeper than that. 'The box' is a metaphor that one is actively resisting others. For the action of self-betrayal is an active process. Therefore we are "… actively resisting what the humanity of others calls (us) to do for them.[15, p. 140]" Thus we actively get into the box by means of self-betrayal, and continue to stay in this box by collusion and/or the continuation of resisting others. Or another way to put it, were not willing to give help. In order to get out of the box we have stop focusing on ourselves and begin to focus on the needs and feelings of others. In this way we begin to view them as people and get out of 'the box'. Once we are out of the box we don't have to act in a certain way or behave in a certain manner, for no matter what we do, we are out of 'the box' and the people we are with will feel our authenticity. For example the lady that was on the plane wasn't putting on any masquerade or acting in a way that was supposedly "good" or what

not. She was just out of 'the box', being herself as she is, and her communion became authentic, helpful and loving. At that point she was out of 'the box' towards Bud and his wife.

INTRODUCING THE HEART

In order to explain the same concept using a different terminology, one could say that when we are in 'the box' we have a 'heart at war'[16, p. 46], respectively when we are out of 'the box', we have a 'heart at peace'.[16, p. 46] At any given time, one may either have a 'heart at war' or a 'heart at peace' in their way of being towards another person. Similarly, when we make sweeping judgments about people like they are too fat, skinny, stupid, smart, have a different faith, race, color etc. we are viewing them as objects and not as how we view ourselves (as people) and therefore have a 'heart of war'. Having a 'heart of war' towards another person invites them to have a 'heart at war' towards us, and thus we fall into collusion as explained earlier. One could say "when our hearts are at war, we not only invite failure, we invest in it."[16, p. 54] This is of course because in our interaction with the other party, they sense our negativity in our way of being and thus our hearts collide and we invite the very same conflict in which we are fighting against.

In order to help people alter their way of being from having a 'heart at war' to having a 'heart at peace' I will introduce The Peacemaking Pyramid found in the figure below. We notice that the majority of the triangle is focused on 'helping things go right' while the very tip and smallest portion of the triangle is 'dealing with the things that are going wrong'. Usually, in our daily lives we attribute the majority of our time to 'dealing with the things that go wrong' rather than putting effort into 'helping things go right'. In particular, we are trying to change people directly by enforcing strict discipline for example on our children, correcting poor behavior of employees or essentially trying to change people to act in the way we want them to. If we are not spending our time criticizing and challenging each other we are worrying or thinking about doing it. If we want to be truly productive in maintaining authentic relationships, we have to enliven our efforts at the lower levels of the pyramid rather than solely focusing on the top. The lowest level of the pyramid is of greatest importance and as one begins to move upwards the importance degrees and one has to prioritize one's effort accordingly.
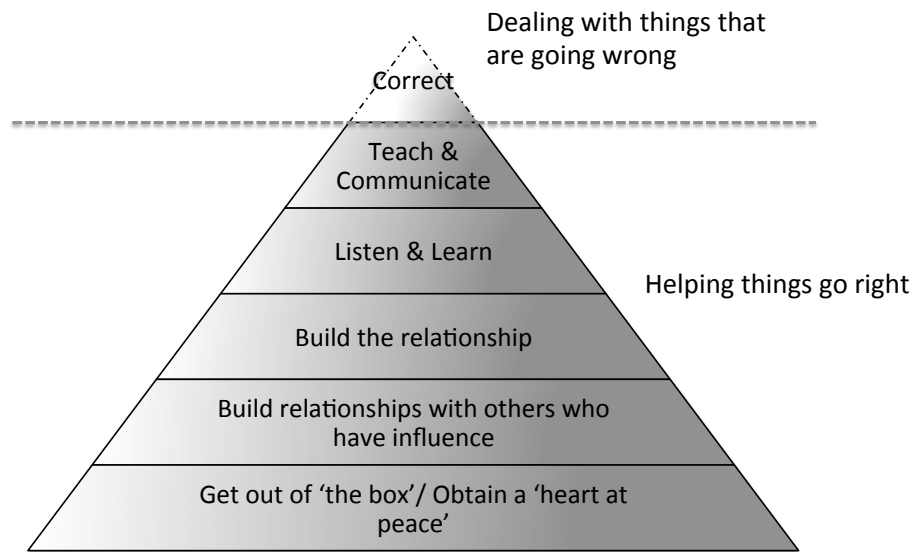
FIGURE 5 THE PEACEMAKING PYRAMID REMADE FROM [16, P. 203]

This pyramid makes it quite clear that in order to help others change from a 'heart of war' to a 'heart at peace'; we have to be willing to change ourselves. While having a 'heart at war' we have a distorted picture of reality and thus cannot see if our perspectives may in fact be mistaken. For instance maybe the views of the others in a team, are not that bad, and I am just overreacting because of my outlook from having a 'heart at war'. From this perspective I cannot tell the difference from what would be constructive for the team or not, but in spite of this, continue to insist that my views are of greater value than the other's. Therefore, first and foremost we have to be able to change our way of being and attain a 'heart at peace' or get out of 'the box'. For if we do not do this all of are other actions will prove to be fruitless. We can see from the pyramid that all the things above the lowest level are behaviors or actions, while the foundation is our *way of being* while performing these behaviors or actions.

Once we have attained a 'heart at peace' we can begin to influence others by working our way up the pyramid. With a 'heart at peace' we can begin to 'teach and communicate' our views clearly and express the reasons for why we are taking our particular actions. However, if I am not able to teach appropriately, the solutions of my corrective endeavors for 'dealing with the things that go wrong' are very likely to be unsuccessful. Furthermore, we have to 'listen and learn' from each other in order to have a mutual relationship. If one continuously rants while teaching somebody, and is not concerned about their views, questions and opinions of the students, there will be no mutual understanding and the teacher may very well be instructing something way above the capacity of the learner. The teacher may be also too preoccupied with the amount of curriculum he wants to disclose, that he rushes through the material without giving the appropriate time and consideration to the students in order to absorb and understand thoroughly the principles that are being discussed. The attitude of 'listening and learning' allows the teacher to remain continuously and consciously humble and can learn from the students if what he is saying is timely and

making sense to them. He will then notice if he is moving to fast or even in some cases realize that his views are distorted and therefore can be open for correction.

The next section of the pyramid is 'building a relationship'. It is easy to tell if we have been 'listening and learning' from the people around us by noticing the quality of our relationships. Do we really *know* the people who we are in relationship? A good example to use in this regard is the father-son relationship. Depending on the quality of their relationship, the father may know things about his son that would be normal in a high quality affiliation for example: his sons favorite music band, movies, computer games, sports, wishes, dreams, hopes and why he has those favorites. Who are his son's friends and why does he like them? If the father has been 'listening and learning' attentively while being with his son, he may naturally gain insight into these questions. Unfortunately, many father-son relationships do not develop into fully flourishing, mutual and authentic bond. If the father is continuously criticizing or challenging his son for whom he has been hanging out with or how he is spending his time etc. it is highly likely that their relationship hasn't reached their ultimate potential. This relationship is analogous to a relationship with one's boss at work, co-workers, neighbors, or others whom one is in close acquaintanceship with. If the relationship between two individuals is completely destroyed, one can then try to begin to build one's relationship anew with the help of other influential people. In the case of the father-son relationship, (and the father has gotten out of his box) he can begin to get to know his son's friends or other supervisors (wife, ex-wife, step-mom, teachers etc.) in order build relationship with them, in hope that that will help influence the relationship with his son. Similarly, a leader in a company can try to find influential employees to help the leader gain better relationships with those he wants to connect with. For in some cases, one has been in 'the box' for so long, that one has to mend the relationship through a third party, and with time can be led back into direct contact and mutual fulfillment with the initial person intended.

Therefore it is critical that one spends the majority of time at the bottom of the pyramid rather than at the top. If one is in a situation that imposes one to apply a correction, for example by a tighter code of conduct at work, more discipline around the house, putting a child into "time-out" etc. than the efforts in the lower end of the triangle should be sufficiently increased as well. For a correction by nature is provocative and therefore one should be aware that one is focusing on the top of the triangle and thus should also apply an even larger effort to the sections at the bottom. Normally, by consciously and actively living the lower levels of the pyramid one will notice that one has to spend less time on correction than one has in the past. Once one has been focusing on the bottom of the pyramid for some time but then has to apply a correction, it will have a larger effect because the relationships with the people involved have increased and thus they will understand more of the context for which that correction has been placed.

 Another idea that to be considered is that the resolution to a problem usually lies at a point lower in pyramid than where the problem exists. For example, if one has tried to

correct something and things do not change, but one persists to try to find a new correction; than it is highly likely that the solution is not a *correction* but rather something at a lower level of the pyramid. This contradicts our normal (unconscious) behavior where we try to apply a new correction because we assume that is where the fault is. For example in the case of the father-son relationship, the father may continue to correct his son (by criticizing his group of friends, sleeping habits etc.) however he may never see any change because he needs to engage at a different level of the pyramid. In this situation an increase in effort to build a relationship may be what is needed for seeing a change in his son.

A story from the book [16, p. 151-157] may help illustrate this point is as follows: There was a teenage girl named Jenny who on her way to a correctional facility with her parents in Arizona. She was a very mischievous young woman and hard to control, so her parents decided to take her to this camp in hope that that would help her. Upon arrival to the campgrounds, it was clear that she had no intention of joining the new batch of youth that had also arrived for their first day. Instead she decided to take off running into the wilderness barefoot. The instructors from the camp let her run; however a few of them (of a similar age) followed her from a comfortable distance behind. As they walked they tried reasoning with her, but she was just screaming and yelling that her parents and betrayed her and tricked her into coming to the camp. She was furious and would stop for anything. After some time the instructors began to notice blood in the pathway behind the girl, her feet had begun to bleed because of the hot ground in the scorching summer sun. At this point, one of the instructors asked if Jenny would take her shoes because her feet were fine. Jenny didn't accept and continued on walking. But what the instructors decided to do at this point was to take off their shoes as well. They were showing Jenny that they were at the same level and were following the same requirements and limitations. After a few hours, Jenny finally cooled down and was willing to listen to the instructor about what the camp was about. Then after talking together for a while, Jenny out of her own will decided to attend the camp. While traveling home Jenny felt deeply sorry for what had happened to the instructors feet (because they eventually became bloody and sore as well) and was even brought to tears.

In the light of this story we can see that although the instructors were aware that how Jenny was behaving was wrong, they still endured in trying to help her. They helped her by putting themselves on her level by removing their shoes and walking with her at a comfortable distance behind. This heartfelt gesture of viewing themselves as equals made Jenny feel welcomed in their presence and they were not judging her as someone who was 'bad'. They viewed Jenny rather as a friend that was struggling with some problems, and were patiently waiting for Jenny to approach them when she was ready. This simple act invited Jenny to look at these instructors in a new way, and they could then begin to build a better relationship with each other.

This story is analogous to what happens in our workplaces and homes. Where we have lingering resentment towards each other because of situations where help was

not offered or resources were held back. We often take pride in our privileges at work while others have different standards in which they have to abide according to their position (parking space, vacation time, office size etc.) and may see ourselves as someone who requires special treatment. If we are not able to distinguish between which privileges are necessary for our function in the whole of the company and which are personal indulgences, than we may be setting ourselves up for conflict with our coworkers. For the most important thing to being a part of a unit, or as a leader of a company, is our capacity to create an environment that allows everyone to have a 'heart at peace'. That is why ultimately the foundation of the triangle is making sure that one is out of 'the box' and attains a 'heart at peace' at any given time. For effectiveness of the actions that take place in the above sections of the triangle depend on one's state of being. Thus "Peace—whether at home, work, or between peoples—is invited only when an intelligent outward strategy is married to a peaceful inward one."[16, p. 208]

Four Steps for Getting Out of The Box

In order to get out of the box and "recover inner clarity and peace" The Arbinger institute recommends some guidelines.[16]

1. Look for the signs of the box. If you catch yourself blaming, justifying or horriblizing yourself or others either within your head or verbally, catch yourself for you are at that point in 'the box'. If one is familiar with the common box styles (which can be found in the appendix) this will make this easier for recognizing in 'the box' behavior.

2. Once you have caught yourself and you are in 'the box'. Begin to focus all you energy and will on getting out of 'the box'. One can do this by bringing to mind out of 'the box' relationships, memories, activities, places etc. or one can try to seek guidance from friends that you are not in the box with the hope that they can cheer you up so that you can get out the box. Music, dance, song, other arts or physical activity may do the trick for getting yourself out of the box. The point is to get your mind out of the negative rut it has gotten into so that you can get back to being your normal joyful self. Begin to recognize your own method for getting out of the box and remember it so that when you are in the box at a later date you can try that method again.

3. After you are out of the box, ponder the situation you are in once more. From this out of the box perspective you will (should) not have any negative resentment towards the people involved and should feel a freshness and aloofness of being able to see the situation with new eyes. One is generally calmer, more stable and less anxious at this stage in the process and can begin to see the dawning point of a solution. It is as if the dust has settled a bit and the situation isn't that bad as first anticipated. Some questions one could ask that might help at this point are: "What are this person's or people's challenges, trials, burdens, and pains? How am I, or some group of which I

am a part, adding to these challenges, trials, burdens, and pains? In what other ways have I or my group neglected or mistreated this person or group? In what ways are my better-than, I-deserve, worse-than, and must- be-seen-as boxes obscuring the truth about others and myself and interfering with potential solutions? What am I feeling I should do for this person or group? What could I do to help?" [16, p. 190]

4. The last step is to take action on what you feel is right to do based on the outcome of your contemplation. This takes courage but once one has reached a conclusion and motivation to perform it has been born, one should not betray oneself again and continue this process until a resolution to the problem appears in your life. Don't doubt your self and continue to use your inner feeling as a guide to make sure that you do not fall back into the box by self-betrayal. For if you begin to do that you will enter 'the box' again. This is a very crucial step and one should remember to stay true to one's inner feelings of the matter.

If the conflict is more complicated and involves more people, then it will take time to influence everyone. However, your immediate surroundings can be peaceful with this new out of 'the box' perspective. You will be able to be a team player, who is productive and creative for your are not depressed, stressed or worried because of your fresh perspective. People will be attracted to your way of being towards them and will enjoy your authenticity. With time by living out of the box, this attitude will rub off onto others and gradually there can be seen a change in one's larger social circle. One should only be responsible for oneself (i.e. not fault finding in others) and alert of one's own process of self betrayal and that will be enough to see a visible change in one's life for the better, and be able to start giving.

TO SUM UP

The essence of self-deception is that by the active process of self-betrayal we begin to view others as objects rather than as people. This principle is originally from the Jewish philosopher Martin Buber in his work "Ich und Du" from 1923. His philosophy is one of the building blocks for the perspective that The Arbinger Institute has produced by utilizing the simple concept of 'the box' or having a 'heart at war'. With this simple tool we can begin to recognize when we are in 'the box' ('heart at war') and have a method for getting out. By utilizing this method we can stop the process of collusion and thus become a part of the solution rather than the problem. Similar to when Semmelweis found a method for reducing the mortality rate at Vienna General Hospital, the moment he realized that it was the doctors that were causing the problem. Finally in order to be contributing to our innovative climates, we need to be focusing on helping achieve results and not be focusing on ourselves. For when we are focusing on ourselves we enter 'the box' and are therefore not conducive for the innovative climate, and are not *giving* to our organization and everyone one in it.

With this it is quite clear that we as human beings have a great responsibility to find a way to maintain our relationships. If we do not take responsibility to find a method for how to authentically and continuously relate to others, we can fall into the 'the box' and remain there until a situation unconsciously takes us out. However, when we begin to realize the mechanism behind why we are in or out of 'the box' we can begin consciously become aware of what triggers this state of mind. With practice and constant self-observation we can begin to realize the people in our lives who put us in 'the box' and begin to view them as a person rather than as objects. Generally speaking when we are happy, joyful, optimistic, open, creative, productive, welcoming, see things straightforwardly etc. we are out of 'the box' or we have a 'hearts at peace'. When we are upset, mad, furious, scared, worried, angry, jealous, pessimistic, uncreative, annoyed, view things distortedly etc. we are in 'the box' or have a 'heart at war'. There is a clear distinction in our way of being between the two different cases, and is there is a fundamental shift in our state of mind. We are either in or out of the box at any given time and this may change throughout our day depending on how aware we are of our inner state. Sudden new information (like failing a project) or encountering a challenging person may fling us immediately into 'the box'. However, if we realize we are in 'the box' we can begin to try to make it out. The most fundamental change is of course changing from having a 'heart at war' to a 'heart at peace' in our way of being towards others. Some helpful diagrams about typical boxes we fall into and some do's and don'ts while trying to live the material can be found in A.1 and A.2. Also in A.3 is a discussion about 'stress,' which is a typical symptom of being in the box, and I bring forth some ideas and concepts that may help us look at stress in a new way. This new insight may be constructive to understanding the nuances to why we are in the box, and help us know what to do to get out.

A Method for Getting in Contact With our Hearts

Lets focus in on the heart now that we realize that having a 'heart at peace' (being out 'the box') is the most important thing in our relationships, and the first step towards having healthy innovative climates. Everyone one has heard idioms and expressions that have to do with the 'heart' in our language. For example 'he has a big heart', 'lion hearted', 'heart broken', 'shallow heart', 'crushed heart', 'to lose heart', 'from the bottom of your heart', 'heart of gold', 'learn something by heart', 'tender hearted' etc. These expressions have different meanings but all have to do with the human heart and its qualities. One may say that anything good about a person has to do with the quality of their heart. However, this is somewhat vague and we lack the nuances necessary to distinguish the different qualities of the heart. This may be why we often struggle to express our feelings and emotions to each other in our relationships. In order to develop our power of expression concerning the emotions of the heart Puran and Susanna Bair, in their book "Energize Your Heart in Four Dimensions", have proposed a model that may help us communicate and develop our hearts capacity.

According to the Bairs, when we speak of our hearts we can speak of several things. We can speak of the physical heart, which has its functions to circulate oxygen, dispose of waste gasses etc. We speak of the energetic heart which radiates an electromagnetic pulse to its surroundings which is measurable however not visible. And we can speak of the emotional heart, which is invisible and transpersonal. This is experienced in the way we are as human beings: joyful, graceful, creative, intuitive, responsible, disciplined etc. These three hearts are closely linked and each heart affects the other. They are all inseparable and intertwined with on another. For instance when we feel emotional stress the physical heart shifts its rhythm, when we feel love we become happy and that can be noticed and felt by the people around us.

It requires effort to consciously get in contact and develop the capacities of the heart. The heart is often hidden underneath many layers of dross and in such a case one's character may be considered to be 'cold hearted', uncompassionate or unloving. While a 'pure hearted' person may considered to be warm, helpful and lovable. In most cases, since this process of getting in touch with our hearts is not common, we tend to swing between the two and this fluctuation is rather unpredictable. In these situations we tend to express ourselves as if we are 'just having a bad day' or 'not really feeling it'. We tend to just continue 'as is', and hope that tomorrow will be better. Sooner or later we have to confront this feeling within us that is a sense of longing for something bigger. This feeling usually arises in situations where we feel uncomfortable and uneasy. Perhaps even slightly hungry, which is peculiar since we have just eaten, but nonetheless find ourselves glaring into the refrigerator. Nearly

everyone has felt this feeling of yearning for something, however we don't seem to have a method to make the feeling go away.

Some in these situations express themselves through arts or music. Others may do acts of service or partake in some physical activity. Whatever the expression may be, it is usually something that one does, in hope to satisfy the heart, either consciously or unconsciously. At some point in our lives we will have to confront our hearts, where it can be embraced or rejected and forgotten. It is possible to live without the awareness of one's heart, however it is challenging. For imagine if you had a feeling of unease, however never knew what it meant, why it was there, or what you could do about it? This is what a lot of us are experiencing today for we very rarely make conscious effort to contact our hearts directly.

We all have the capacity of the heart, however the degree in which this capacity is developed may vary. We may be able to be act courageously, nobly and lovingly when our hearts are full of energy, however if this energy is used up or is not there, we may become cruel, stingy, unhappy, mundane and selfish. When our energy is low, we need to recharge. The rate for which we become depleted has to do with the capacities of the heart and is related to purity and quality of the heart.[17, p. 20] By becoming aware of the process of energizing one's heart, we can begin to increase its capacity and fill it up with energy. Similar to a container, which is filled up and then distributed according to the challenges and tasks in one's life. The energy that we put in this container is called 'love'. In this regard, its not the romantic or poetic notion of love, but the objective power of love that inspires our decisions (conscious and unconscious), our creative ideas, the courage to follow through with these ideas etc.[17, p. 21]. "When we discover how to energize the creativity of our heart, then we can be creative in finding solutions to the problems of our lives. It's not done with will-power, and making a decision is not enough. Change comes from a change of heart."[17, p. 41]

The heart and the mind are distinguishable but they are also linked. A lake can be used as a metaphor to help us understand the interaction the between the heart and the mind. If we view the surface of the lake as the mind and the depth of the lake as the heart, we can see that the emotional undercurrents from the heart can create troughs and waves at the surface, while powerful winds at the surface can also affect the lake. The surface often changes quickly while the undercurrents require more energy for them to change direction. Similarly our heart can suddenly give impulses that appear and find expression in the mind, and repeated thought patterns can have an influence in the heart, for example when we 'learn things by heart'. [17, p. 35]

An interesting quality of the heart in comparison to the mind; is that the heart performs synthesis while mind performs analysis. In other words the mind separates things into parts in order examine something, while the heart combines things to view it in context to the entirety. The heart is the source of pain and joy, it experiences while the mind observes. The mind may argue very forcefully for something, however

if the heart is touched, the mind is quickly abandoned. When one's heart knows what is wishes, it quickly becomes the wish of the mind too. [17, p. 37] "The heart leads and mind follows, the heart is the master and the mind is the servant."[17, p. 38] If we refer back to 'the baby crying story' from the chapter before, it was the synthesis of the heart that said 'tend to the baby', however when we decided to betray that feeling with our mind, we betrayed our heart and thus started the process of having a 'heart at war'.

The book "Energize Your Heart in Four Dimensions" provides us with a method and a model to get in contact with our hearts. For in order to energize our heart reliably, we need a method to get in contact with our hearts. If we cannot reach our hearts (or have never experienced our heart before) a method will help us get in touch with our heart. With the help of the model we can begin to interpret our experience of what we are feeling. If we do not have a model it is easy to misinterpret our experience or even deny the experience we are having. "Experience is the engine of growth, but interpretation steers experience."[17, p. 41] For example it seems that the sun orbits around the earth based on experience, but in fact the true model of the solar system is that we rotate around the sun. Therefore the model we have for interpreting our experience has large consequences on the way we experience things.[17, p. 41-42] I hope you find their model and method helpful and it is described in more detail in A.4.

MEASURING THE EMOTIONAL HEART

As we have now seen the qualities of the heart are well established in our language and in the way we express ourselves in our relationships. Inspired by this metaphorical or poetic phenomenon that is found in human expression, scientists have begun to explore if indeed some of these metaphors reflect themselves in the actual functioning of the heart. Particularly the HeartMath Research Center, based in Boulder Creek California are dedicated to understanding the hearts influence on peoples health, wellbeing, performance and influence on one's surroundings.[18, p. 2] Through their experimentation with psychological as well as physiological tools, they have found a strong correlation between heart rhythms and one's inner emotional states. It seems that the heart is more than a single pump that it is often referred to in today's common sense. The heart is rather a very intelligent self-organized "brain of its own" so to speak that communicates with the cranial brain through various pathways including amongst other things the nervous system, and hormonal system.[18, p. 3]

Walter Cannon (1871-1945) suggested that it was our brain that was predominately responsible for the shifts in our inner states in reaction to external stimulus. For instance, the mobilizing energies of our nervous systems worked in sync with- and was controlled by- our brains, as we are mobilized in situations of 'fight or flight'. However, John and Beatrice Lacey discovered in their research doing the 60s and 70s that there was a communication between the heart and the brain that had an

influence on how we view and react to the world. In 1974 Gahery and Vigier were doing research on cats and discovered that when they stimulated the vagus nerve, which is pathway that sends many signals from the heart to the brain, the electrical activity in the brain was reduced by about a half of its regular value. This was the early stages of the birth of Neurocardiology which since then, has illumined new understandings of how the heart and the brain communicate through the nervous system.[18, p. 3-6]

The heart detects hormones, neurochemicals, heart rate and pressure information through its neurons. This information is then translated by the hearts nervous system into neurological impulses that are then sent to the brain through different pathways, which are the same pathways which pain signals and other feeling sensations are delivered to the brain. These signals are collected at the brain stem and are translated into information that regulates the autonomic nervous system that sends signals out of the brain to the blood vessels, heart, and other organs. In addition, perception, decision making and other cognitive processes are also effected by these signals as they are passed to higher centers of the brain.[18, p. 4]

Roughly 80% to 90% of the nerves in the vagus nerve are afferents. That means they go from the heart to the brain. The afferents communicate with several of the parts of the brain that have to do with emotional processing. For instance the thalamus, hypothalamus and amygadala, and further support the proposal stated by HeartMath and others that the heart has an influence on the emotional processing and emotional experience.[19, p. 38, 20, p. 90] A figure of the known passages of the afferent passageways is shown below.
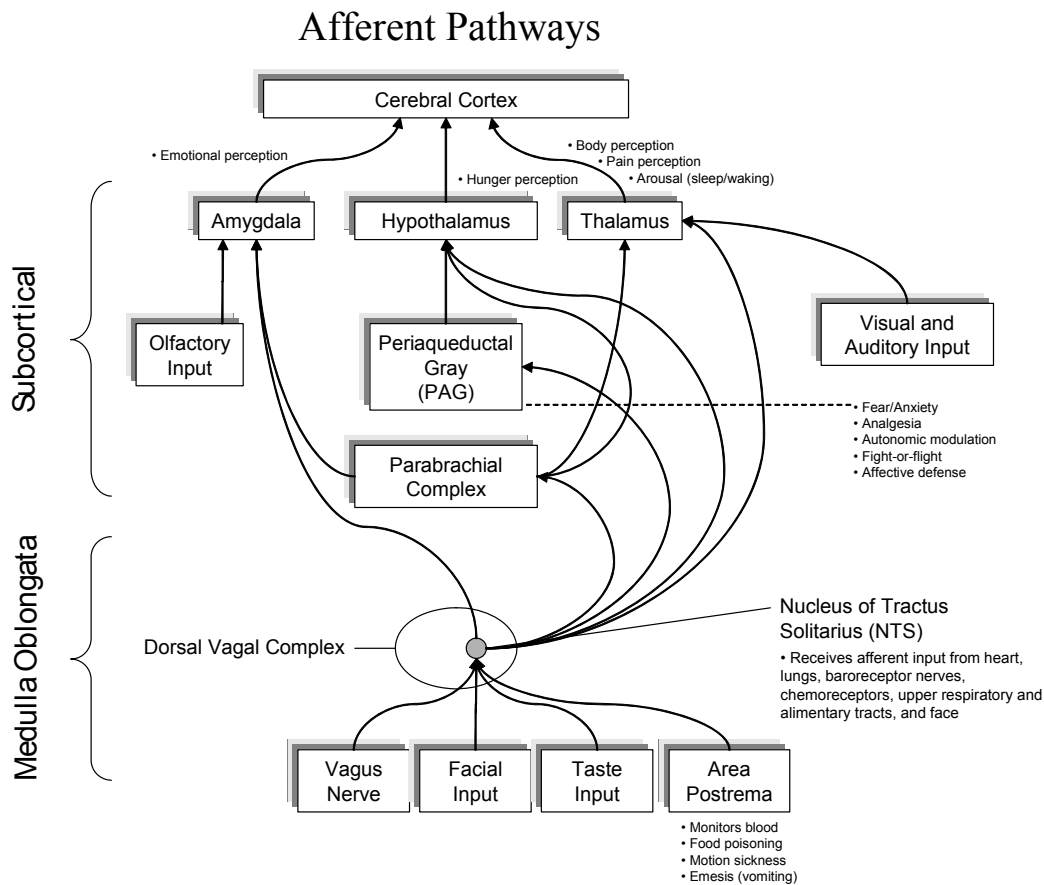
Afferent Pathways

FIGURE 6 DIAGRAM OF CURRENTLY KNOWN AFFERENT PATHWAYS FROM THE HEART TO THE BRAIN[20, P. 90]

COHERENCE

Based on the research of the Institute of HeartMath (IHM) they firmly state that "the heart, brain, nervous, hormonal and immune systems must all be considered fundamental components of the dynamic, interactive information network that determines our ongoing emotional experience"[18, p. 7] in contrast than before where it was thought to be the brain that had mastery over the emotional state of the body. Once individuals gain understanding over the connection between the mental and emotional systems of how they body functions, they can begin to practice something that IHM calls "psychophysiological coherence".

When we speak of coherence we usually refer for something that is united or correlated to each other as a whole. We think of a coherent argument if someone's ideas are coherent, if they logical and consistent, rather than meaningless and incoherent. Other understandings of the word may refer to the state of "flow", "the zone" or the feeling of being connected to others and to our environment.[20, p. 85] When two or more oscillatory systems come into phase or frequency-locked one can

call this cross-coherence and occurs in lasers but also in physiology when one or more of the bodies oscillatory systems (for example the heart and the breath) combine to operate at similar frequencies. Another use of the word is auto-coherence, which is for example when a wave pattern becomes highly ordered or structured like a sine wave.[18, p. 16] Coherence refers to something whole and being in natural correlation with the individual parts with efficient energy utilization.[20, p. 86]

For any system the individual parts have to work together in order to contribute to the whole. However, it is important to note that there is a distinction between coherence and the degree of coordinated action or energy efficiency; for although things may me synchronized it may not result in coherent flow or behavior.[20, p. 86] In our bodies we may have emotion and attitudes that are either coherent or incoherent at any given time. We may think in one way, and feel or act in another. Thus our thoughts are incoherent with our emotions or actions and that can be in-efficient and non-productive. A hypothetical example of this can be seen in the internal state of a parent as he spanks his child, as punishment, for hitting another child. Which is confusing for the child, in contrast to patiently trying to assist the child in understanding that hitting other another person is not the best solution. In this manner the parents emotions, feelings, actions etc. are coherent with the message the parent is trying to explain to the child.[19, p. 18]

"Psychologically, the coherence mode promotes a calm, emotionally balanced, yet alert and responsive state that is conducive to cognitive and task performance, including problem-solving, decision-making, and activities requiring perceptual acuity, attentional focus, coordination, and discrimination. Individuals generally experience a sense of enhanced subjective well-being during coherence due to the reduction in extraneous inner "noise" generated by the mental and emotional processing of daily stress and the positive emotion-driven shift to increased harmony in bodily processes. Many also report increased intuitive clarity and efficacy in addressing troublesome issues in life."[19, p. 28]

On the physical level, when the body is in the state of coherence, the body can enter into a state of entrainment and can been "seen between the heart, respiratory, and blood-pressure rhythms, as well as between very low frequency brain rhythms, craniosacral rhythms, and electrical potential measured across the skin."[20, p. 86] These rhythms can measured and studied and HeartMath has found a strong correlation between the inner emotional states of an individual and variation of one's heartbeat. This can be measured by heart rate variability (HRV). They have found that when one is in a positive emotional state (appreciation, gratefulness, compassion, love etc.) the HRV pattern becomes far more coherent than when compared with feelings of negative emotions (anxiety, anger, fear etc.).

HRV is a tool often used to measure heart-brain interaction, neurocardiac function and one's autonomic nervous system (ANS) reactions. It measures beat-to-beat changes of the heart rate and depicts this variation in a graph. It's normally thought that the heart has constant monotonous rhythm, but healthy hearts actually beat irregularly. This is often neglected when the average heartbeat is calculated, but with the help of the electrocardiogram (ECG) one can derive the variations between the different heartbeats. In order to have an optimal level of coherent function between the different systems in the body, the variation should considerably large. The ability for the heart to vary its rhythm can be likened to a tennis player when he is in his aggressive stance, ready to pounce in either direction that is needed. When one has a large HRV than the heart is ready to take action, and is ready-primed if that is necessary.[18, p. 13] The picture below shows the variations between individual heartbeats.
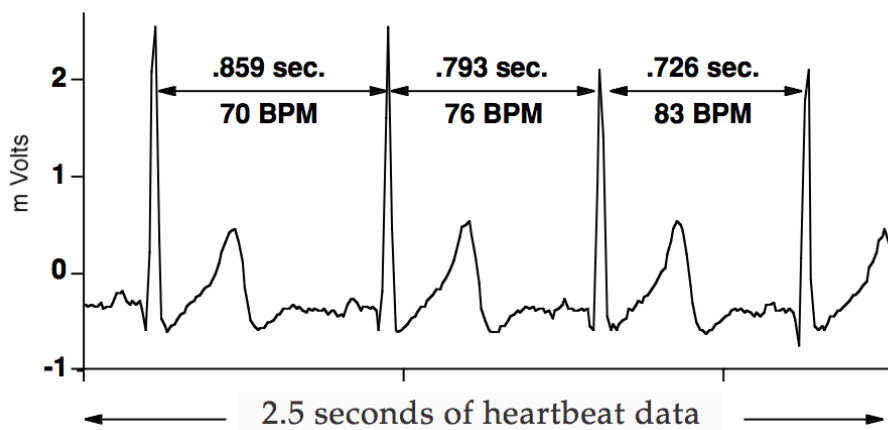
FIGURE 7 HRV MEASUREMENT OF VARIATIONS IN HEART BEATS[18, P. 13]

The ANS has an important role in the body for it interacts with our immune, hormonal, cardiovascular and digestive systems. When one is experiencing positive emotions, then one creates and increased amount of order in the ANS that affects all the systems with which the ANS is in contact with. The flow of neural signals between the heart and the brain are channeled through the sympathetic and parasympathetic branches of the ANS and when these two branches come into harmony with each other one is in the state of coherence. Generally speaking the parasympathetic branch is triggered when one is in a state of relaxation or low activity, while the sympathetic branch is triggered when one is in a state of arousal. And the "hot spot" is when these two branches are in coherence with each other and there is a harmonic balance between the two.

A fascinating feature of this harmonic balance is that the pattern for which the HRV represents, reflects the inner emotional state that the individual is feeling in real time.

The idea is that since the HRV measures the balance between the parasympathetic and sympathetic branches of the ANS system, one can actually see shifts in the emotional state of the individual by looking at the HRV graph. When one is feeling positive emotions the HRV becomes smooth and more like a sine wave, while when one is feeling negative emotions the HRV becomes distorted as viewed in the picture below.
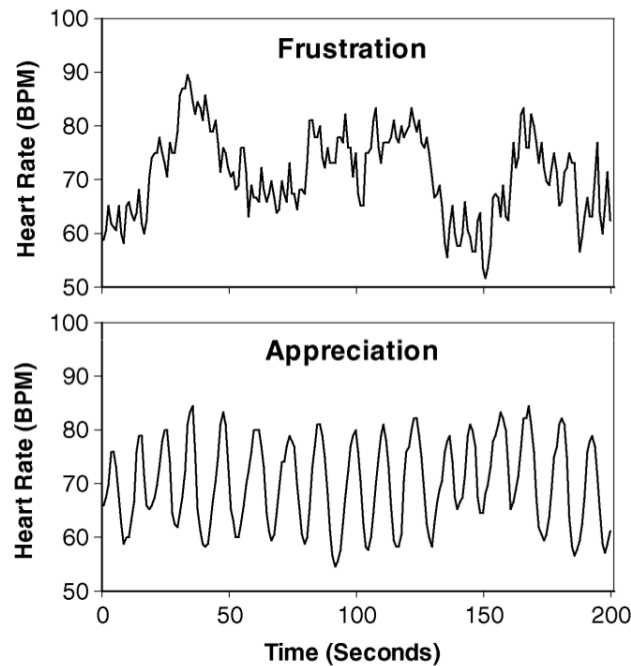
FIGURE 8 DIFFERENT EMOTIONS REFLECTED IN THE HRV PATTERN[19, P. 22]

This HRV function can be transformed using the fast Fourier transform into the power spectral density (PSD) to specify the different contributions from the parasympathetic, sympathetic and the total activities of the ANS. The PSD breaks the HRV signal down into the individual frequencies so that it is easier to depict what frequencies the HRV consists of, and in doing so we can see the relative powers of these different frequencies. There are three main parts to the power spectrum. The High-frequencies (HF) band (0.15-0.4 Hz), the low-frequency (LF) band (0.04-0.15 Hz) and the very low frequency (VLF) band (0.0033-0.04 Hz). The HF band represents the quicker changes in the heartbeat, which are related to the parasympathetic activity. While the VLF band reflect the sympathetic activity of the heart. The LF range in-between is more complex for it is a mixture of both parasympathetic and sympathetic activity and is the area that is referred to be 'the zone' for the coherent state.

The center of this coherent zone is around the frequency of 0.1 Hz and can be seen as a peak on the PSD.[18, p. 14, 19, p. 23] This frequency for most human beings is the frequency where the different systems entrain together and resonate. An example of this entrainment is shown in the picture below. The picture shows the HRV, blood pressure rates and respiration rates of an individual before and after he enters into a

coherent state. The respective PSD diagrams are also shown and it is clear that the frequencies around 0.1 Hz are characteristic of the coherent state, as they seem to resonate at this point. "Most mathematical models show that the resonance frequency of the human cardiovascular system is determined by the feedback loops between the heart and brain... It is reasonable to conclude that coherence and resonance are characteristic of the natural physiological state associated with heart-felt positive emotions."[20, p. 90]
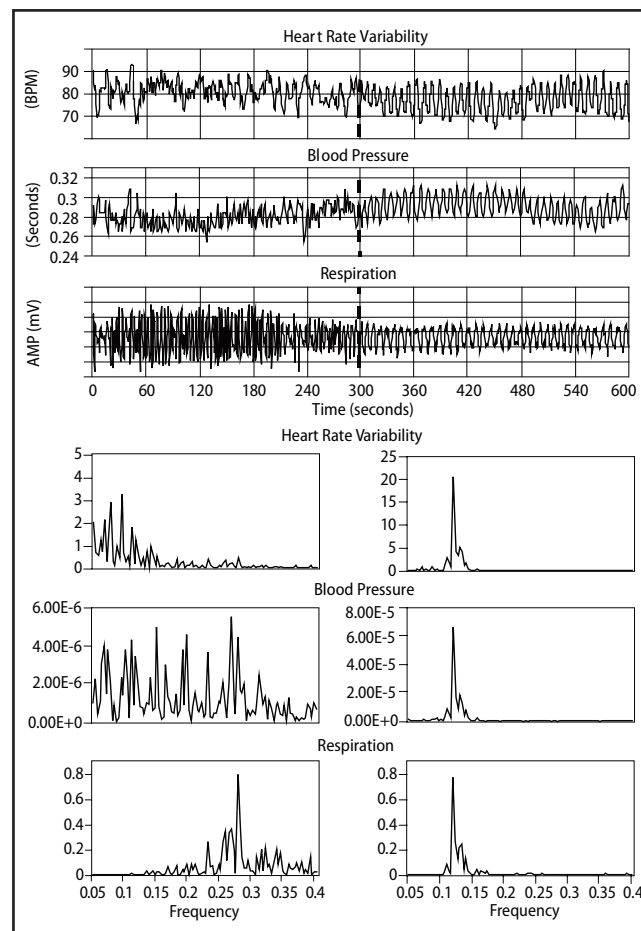
FIGURE 9 ENTRAINMENT [20, P. 88]

In order to calculate the coherence ratio LF/(HF+VLF), one depicts the peak power within the PSD diagram and calculates the integral in a window of 0.03 Hz wide of both sides of the peak. Then one divides this number by the total power minus the peak power. The ratio can be formulated as (Peak power/(Total power-Peak power))=Coherence Ratio.[19, p. 23] A graphical representation of this is shown below.

Heart Rhythm Coherence Ratio Calculation

Find the highest peak within the range of 0.04 – 0.26 Hz

Peak Power: Integral of the window 0.015 Hz above and below the highest peak

Total Power: (0.0033 – 0.4 Hz)

Coherence Ratio:
(Peak Power / (Total Power – Peak Power))^2
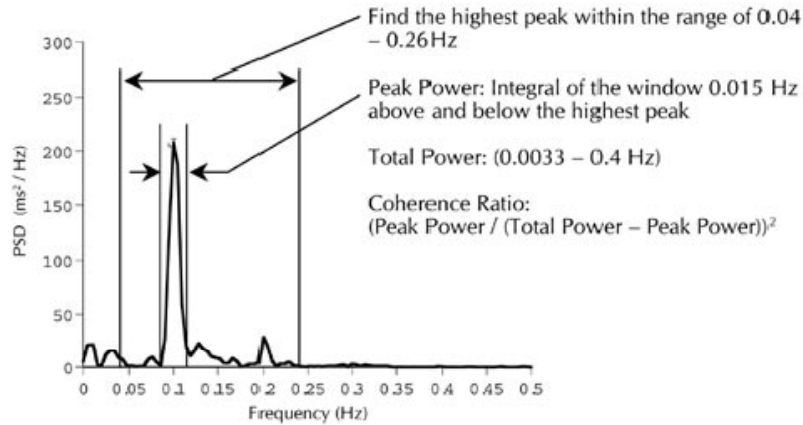
FIGURE 10 COHERENCE RATIO CALCULATION [19, P. 23]

HRV AS A TOOL

By using HRV as a tool, one can begin to practice coming into a coherent state. HeartMath has produced a program called emWave desktop, which is a program for one's computer that includes a sensor that you put into your USB port. This sensor is then connected to your earlobe and it calculates the pulse, and derives one's HRV with a five second delay. This HRV signal is then drawn on the screen as you are performing a reading and the amount of coherence is than calculated to see how close you are to the 0.1 Hz state of coherence. There are several different challenge levels that one can set the program to that calculates the amount of coherence with a smaller and smaller window centered around 0.1 Hz. The smaller the window is, the higher the challenge. Also at the bottom of the screen is a red, blue and green value bar, that depicts whether you are in a low, medium or high level of coherence during the reading (green being the highest, red being the lowest). These values are averaged for each session and one can see how much time one has spent in the low, medium or high levels of coherence during that particular reading. A picture of this window in emWave Desktop is shown below from a session that I had.

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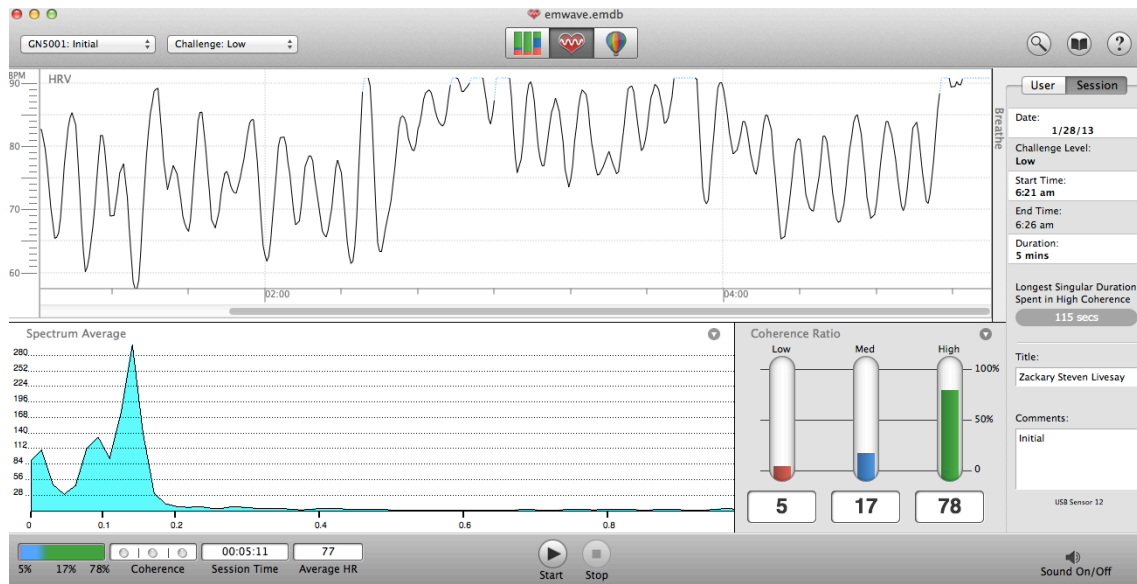
FIGURE 11 EMWAVE SESSION PICTURE

Here we can see the HRV graph at the top of the window, the average coherence ratios in the different colors at the bottom right, and the spectrum average at the bottom left. One can see from the spectrum average that I have a peak a little towards the right of the 0.1 Hz sweet spot, and also two other peaks in the sympathetic range. If I would have been at I higher challenge rate I would have not gotten 78 % green coherence as is shown at the bottom of the screen, but a value considerably less. EmWave Desktop has not published their algorithms for what the differences between the challenge levels are and how they depict the percentage of red, blue and green for copyright protection reasons. Otherwise that would be interesting to know exactly what is happening at each of the different challenge levels. Nonetheless one is able to get a lot of the necessary information that is needed to understand one's progress by looking at the spectrum average.

What is interesting to note, is that in order get higher scores at the increased challenge levels, one actually has to experience positive emotions and hold that feeling in their heart. If one only focuses on trying to get into the state of entrainment by special breathing rhythms or other meditational techniques that do not involve positive emotions, it is very difficult to get into an enhanced state of coherence for it is not just breathing that is important, but the positive emotions as well. It is a fundamentally different state than relaxation for it is conscious and includes the aspect of self inflicted positive emotions.[19, p. 78, 20, p. 93] Breathing however is a very powerful way of synchronizing our hearts, since our breathing is tightly linked to our cardiac cycle. An increase in heart rate usually means an increase in breathing rate and vice versa. We have conscious control over our breathing and therefore we can easily slow down our hearts by slowing down our breathing by (for example breathing in five seconds and then out for five seconds). The emWave Desktop software tutorial suggests when getting into the state of coherence, that you first focus the area of your heart, then after focusing in on your chest you begin to imagine as if you are breathing through

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your heart. After doing that, you grab hold of a positive emotion from the heart and hold onto the positive emotional feeling (like a memory or something that you are thankful for) throughout the time of the reading.

With practice one can begin to notice when one is in the state of coherence by analyzing the feedback from the program and subjectively experiencing the inner state of what that feels like. As one gets used to the feeling of coherence one can begin to increase the challenge level to try to get better spectrum averages for it becomes easier and easier to return to that coherent state. With practice, one can actually change one's "baseline" and have a generally smoother HRV even when one is not practicing coherence and of course the effort to get into coherence is far less for one has had practice of how to get there. "There is evidence that the on-going practice of coherence-building techniques facilitates a repatterning process in the neural architecture where coherence becomes established as a new, stable baseline reference or norm. Self-regulation of emotions and stress responses then becomes increasingly familiar and, eventually, automatic.[19, p. 27, 20, p. 92]

When we have been able to make a shift in our baselines, we are than more capable of maintaining our emotional and mental "centers" for we have a better understanding of what it is that triggers these different emotional states. With this tool to help stimulate the process of self-reflection, we can begin to realize when we are in a state of imbalance and can begin to try to get ourselves back to our centered baseline state. In other words we have an idea if we are in or out of 'the box' by having awareness of what our hearts are feeling both emotionally and physically. By being more centered in ourselves, we can tackle our work situations with greater flexibility and confront our day-to-day strains for we can notice these shifts in inner states as they come. We then recognize what outer challenge has stimulated that inner shift, and thus take appropriate action to return to our stable state. "We have found self-regulation of emotional experience and increasing the ratio of positive to negative emotions to be a very effective approach to reducing stress and increasing one's coherence and resilience".[20, p. 92] And we all know that when we are stressed, we are less likely to give.

EFFECTS OF FOCUSING ON HRV

There has been an increasing amount of research that has been done in order to see the effects of HRV in health care, law enforcement, cooperate, military, and educational settings. "HRV and coherence … has been shown to significantly improve outcome in a number of clinical populations with posttraumatic stress disorder (PTSD), depression, asthma, congestive heart failure, hypertension, anxiety, fibromyalgia, and insomnia."[20, p. 92] And through their investigation of HRV, IHM have created "an heart rhythm coherence hypothesis" which says: "sustained positive emotions induce psychophysiological coherence, which, in turn, is reflected in

increased heart rhythm coherence. Thus, the greater the degree of emotional stability and system-wide coherence, the greater the facilitation of cognitive and task performance."[19, p. 42] Through a series of experiments[5] conducted by IHM, they have shown promising results that indeed there is a correlation between HRV coherence and cognitive performance.

GLOBAL COHERENCE

What is an exciting to think about is what happens when a growing number of people begin to understand and practice coherence? It is obvious to us that when the body is in coherence, at the level of emotions, thoughts and actions, we are better suited to be able to address a given task and therefore when more people are in coherence together we can produce very unified teams. We see signs of incoherence all around us where people are disunified and are driven by their own self-interest with little to spare for selfless behavior. This can be seen in the various acts of terrorism, wars, violence and other abuse that occurs all around the world. But if we could begin to imagine a world that had knowledge of these concepts that in fact we can control our emotions, we can begin to help each other find harmony in our families, neighborhoods and our working environments.

When we are working in teams we have to find unity for the task to be accomplished, but often when we work in teams there is this underlying negative resentment towards each other that doesn't get resolved. However, if employees began to exercise coherence one would be better equipped to be able to deal with the challenges that arise as they are collaborating, and thus be able to either resolve the problems on the spot, or at least be able to acknowledge the problem, the emotions associated with that, and then continue to work but with the emotions under control. (Hopefully at some later time, the reasons why these emotions were triggered can be taken care of together with the people involved. Thus reducing the possibility for something similar occurring again.)

There are times when natural disasters spark this sense of collaboration amongst the community, where the forces of separation give way to the forces of love and compassion. It is as if these events open people's hearts and they begin sacrificing themselves for the welfare of others. Looking back after what work the community was able to do when they were unified is often very surprising, however this sense of group effort and togetherness often fades after some time as the rhythms of normal life are reestablished.[20] However, we do not have to wait for a natural disaster to strike

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[5] To see the results of some of the experiments that have been conducted by IHM, refer to [19]   R. McCraty, M. Atkinson, D. Tomasino, and R. T. Bradley, "The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order," *Integral Review,* vol. 5, pp. 10-115, 2009.

to remind us of how important it is to take care of each other.

Professional team sports, symphony orchestras and other collaborative efforts are examples of how humans can work together in very structured ways. If any interpersonal conflicts occur within the group, they should be resolved as quickly as possible for it not to affect the rest of the team. Research has begun to try to register the electromagnetic waves of people hearts, to see if there is any correlation between the signals that are sent from an individual's heart and its effect on others. For "of all organs, the heart generates the largest rhythmic electromagnetic field, one that is approximately 5000 times stronger than that produced by the brain."[20, p. 97] Experiments have been conducted that show evidence that when one person is in the state of coherence; the electromagnetic field that the heart emanates can be detected by other nearby animals and humans. The rhythmic pattern of the heart is reflected in the frequency spectra of the magnetic field reradiated by the heart and consequently information about one's emotional states are radiated throughout the body and into the surrounding environment.[20, p. 97] With this in mind it will be interesting to see in the future when a growing amount of people learn about coherence and how it effects the people around them.

If we continue to investigate coherence and practice it in our lives we may be able to "transform stress into resilience" as the emWave Desktop slogan reads. Where "resilience is related to self management and efficient utilization of energy resources across four domains: physical, emotional, mental and spiritual." [20, p. 88] A figure of this balance is shown in the figure below.
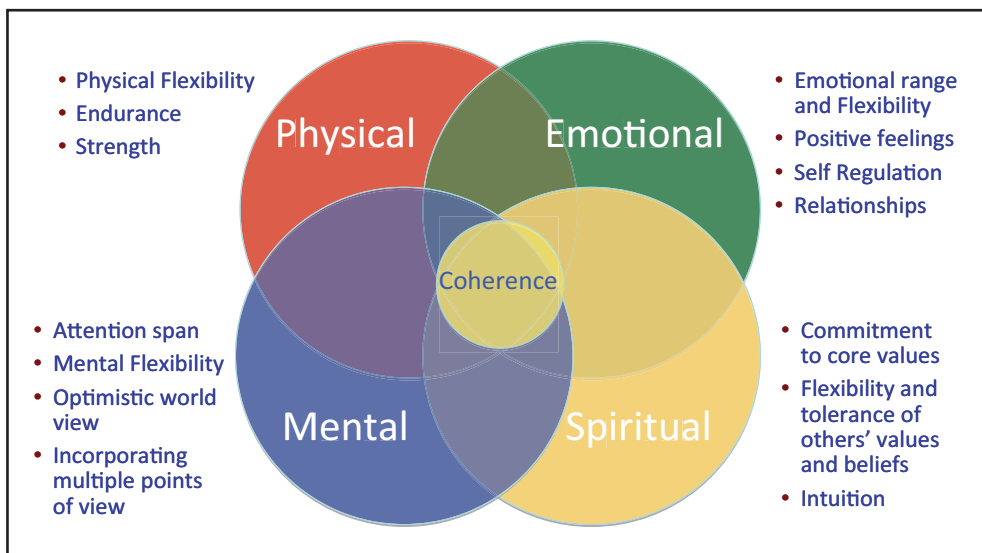

FIGURE 12 RESILIENCE DIAGRAM[20, P. 89]

If we become resilient we can become increasingly effective at "recouping from challenging situations" but also be prepared "preventing unnecessary stress reactions (frustration, impatience, anxiety) that deplete our physical and psychological resources."[20, p. 88-89] With this knowledge of understanding and practicing

coherence, we can become more well-rounded human beings and ultimately more alert, prepared and resilient to be able to tackle life's challenges as they come.

EXPERIMENT WITH HRV

I thought it would be a good idea to try to gather some experience with using the emWave Desktop program and see if in fact that HRV is something that would be valuable and teachable to engineering students. HRV may be a strong motivator to begin the process of connecting to one's heart and begin to notice the psychological and physical benefits therefrom.

METHOD

While I was in India attending the Self-Awareness course at IIT Madras, we used the emWare Desktop software from HeartMath to measure the student's progress in coherence throughout the year. The way the measurements took place is that we had three computers with the emWare software installed and three students at a time would take a (roughly) five-minute reading.

We took one initial HRV reading at the beginning of the course when the students had no exposure to the knowledge of HRV or other subjects within the course. This was essentially to get a baseline. The students were just told to relax and not do anything special (like personal meditation techniques etc.). Then some weeks later, after some exposure to HRV, coherence and the other topics from the course (for example 'the box'), we took a second reading. This time it was during a 'stressful situation' namely the mid-term exam. We wanted to test the student's ability to maintain coherence even under pressure. Finally at the end of the semester we took one more reading during the stressful situation of the end-term exam. The students would be writing on their exams until it was their turn to take a reading and would be called up, take the reading, and then return to their seats to finish the exam. The final grade of the course consisted of the mid-and end-term exam, and homework assignments that were to be done sometime during the semester.

What I wanted to see is if (1) the state of coherence could be learned? (2) If there was any significance between the grade that the student received and their coherence score from the readings and (3) if there was a difference between girls and boys. A figurative representation of the measurement over time is represented below. R_i is the amount of "Green" the student got throughout the reading the K for Karakter in Norwegian means grade.

$$R_1$$

$$R_2$$

$$R_o \qquad K_1$$

$$K_2$$

Start of course   Mid Term   End -Term

$$K$$

Time
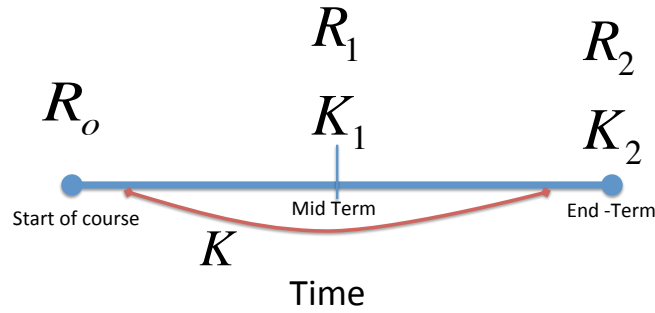
FIGURE 13 FIGURATIVE REPRESENTATION OF THE MEASUREMENTS TAKEN

Data Points	HRV Readings	Grades / (K)arakter
Initial (Mid-January)	R_0(100 pts.)	
Mid-Term (March 12th)	R_1(100 pts.)	K_1 (20 pts.)
End-Term (April 23rd)	R_2(100 pts.)	K_2 (40 pts.)
Assignments		K (40 pts.)
Total (all Ks put together)		K_{tot} (100 pts.)

TABLE 1 DATA PARAMETERS

RESULTS

There were 53 students that credited the class from different departments within the University. I had to remove 10 students from the analysis due to faulty data (for that haven't taken all the HRV readings, tests, etc.) The two pie graphs below show the diversity of departments of the students that were attending and the amount of boys vs. girls in the class.
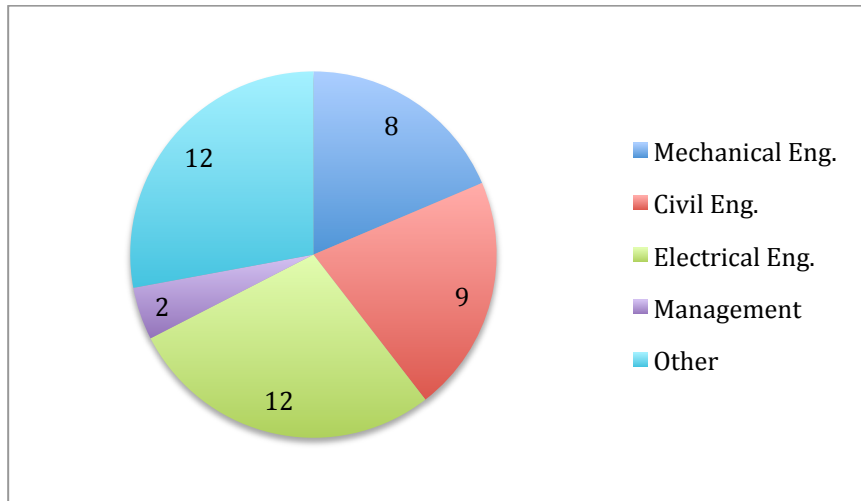
FIGURE 14 DIVERSITY OF STUDENTS IN CLASS
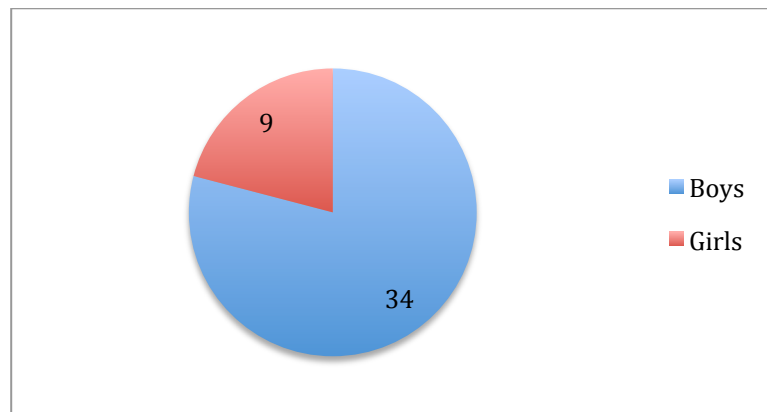
FIGURE 15 PIE CHART OF GIRLS VS. BOYS

At IIT Madras there were more boys than girls that went to the university. This was also represented in the amount of boys vs. girls that attended the Self-Awareness course. The majority of the class was studying a branch within engineering, but there were some students from some of the softer sciences as well. I was hoping to draw some conclusions from the looking at the diversity of the students to see if any branches were better than others, but there were not enough students in my sample to see any significant differences between them.

(1) CAN THE STUDENTS IMPROVE THEIR HRV?

The first thing I wanted to look at was to see if coherence could be learned. In order to do this I set up the hypothesis:

$$H_0 : R_i - R_j = 0 \;\; \text{Vs.} \;\; H_1 : R_i - R_j > 0 \;,\; i{>}j \;,\; i,j = 2,1,0$$

With $R_1 \,\&\, R_2$ as an example:

We have two samples:
$$R_1 = (R_1^1, R_1^2, ..., R_1^n)$$
$$R_0 = (R_0^1, R_0^2, ..., R_0^n)$$

Assume that the samples are approximately normally distributed with unknown mean and variance.

$$\overline{R}_i = \frac{1}{n}\sum_{k=1}^{n} R_i^k$$

This is then estimated by:
$$S_{R_i}^2 = \frac{1}{n-1}\sum_{k=1}^{n}(R_i^k - \overline{R}_i)^2$$

$$Z \overset{n>30}{=} \frac{\overline{X} - \mu}{\sigma/\sqrt{n}} \approx N(0,1)$$

When we have an unknown sample variance we have to use a t-test, but since we have 43 measurements $n>30$ and we can use the normal distribution. From our hypothesis the μ is 0 and have the significance level of 0.05.

Test Statistics:
$$Z = \frac{(R_1 - R_0) - 0}{\sqrt{\dfrac{S_{R_0}^2}{n} + \dfrac{S_{R_1}^2}{n}}}$$

Significance level:
$$0.05 \rightarrow Z_{0.05} = 1.64$$

Reject H_0 if $Z > Z_{0.05} = 1.64$

- If we reject H$_0$ then there is suggestive evidence that R$_1$>R$_0$ with a significance level of 5%
- If we do not reject than we do not have sufficient evidence that they do not get a better reading throughout the course

95 % probability that R$_1$-R$_2$ is here

If H$_0$ is correct than it is it is less than 5% chance that R$_1$-R$_2$ is here.

0      $Z_{0.05}$=1.64   Z
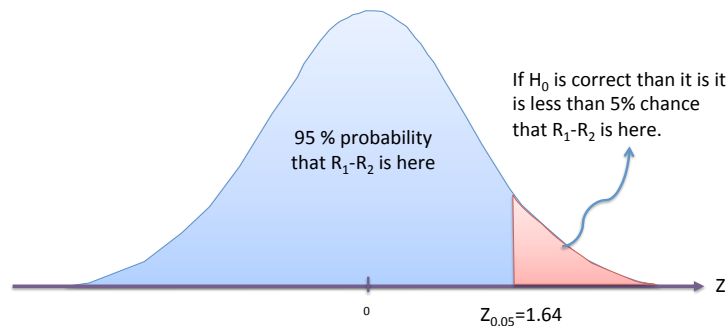
FIGURE 16 NORMAL DISTRIBUTION WITH A SIGNIFICANCE LEVEL OF 0.05

I found examined the data and the results can be found in the tables below.

$\bar{X}(R_0) = 48.535$	$\bar{X}(R_1) = 83$	$\bar{X}(R_2) = 62.395$
$S^2(R_0) = 1183.445$	$S^2(R_1) = 628.952$	$S^2(R_2) = 646.15$

TABLE 2 MEAN AND VARIANCE

Notice that there is a drop in mean between R_2 and R_1.

Z(R$_1$,R$_0$)	$\dfrac{83 - 48.535}{\sqrt{\dfrac{628.592 + 1183.445}{43}}} = 5.3$	**Reject H$_0$**
Z(R$_2$,R$_0$)	$\dfrac{62.395 - 48.535}{\sqrt{\dfrac{646.15 + 1183.445}{43}}} = 2.12$	Reject H$_0$
Z(R$_2$,R$_1$)	$\dfrac{62.395 - 83}{\sqrt{\dfrac{646.15 - 628.952}{43}}} = -3.78$	Do Not Reject H$_0$

TABLE 3 HYPOTHESIS REJECTION

(2) IS THERE A CORRELATION BETWEEN K$_I$ AND R$_I$?

In order to find this relationship I have analyzed the following hypothesis:

$$H_0 : Cor(K_i, R_i) = 0 \ \ \text{Vs.} \ H_1 : Cor(K_i, R_i) \neq 0 \ , \ i = 0,1$$

We have two samples:
$$K_i = (K_i^1, K_i^2, ..., K_i^n)$$
$$R_i = (R_i^1, R_i^2, ..., R_i^n)$$

We assume that the samples are normally distributed and we estimate the correlation between them by using:

$$Corr(K_i R_i) = \frac{\sum_{j=1}^{n}(K_i^j - \bar{K}_i)(R_i^j - \bar{R}_i)}{\sqrt{\sum_{j=1}^{n}(K_i^j - \bar{K}_i)^2 \sum_{j=1}^{n}(R_i^j - \bar{R}_i)^2}} = r \ \text{(for simplicity)}$$

We test the statistic with: $t^* = \dfrac{r\sqrt{n-2}}{\sqrt{1-r^2}} \sim t_{n-2}$ using a t-distribution with n-2 degrees of freedom.

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The critical value is if: $\left|t^*\right| > t_{\alpha/2}, n-2 \rightarrow$ Reject H_0

With α=0.05 and n=43 we get from table: $t_{0.05/2}, 43-2 = 2.02$
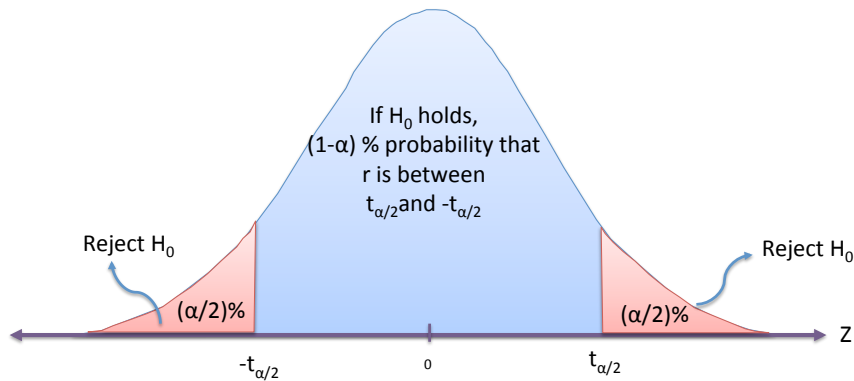
FIGURE 17 NORMAL DISTRIBUTION, TWO-SIDED HYPOTHESIS

$$\left|t^*\right| = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{r\sqrt{43-2}}{\sqrt{1-r^2}} > 2.02 \rightarrow \text{Reject } H_0$$

$$\frac{r\sqrt{41}}{\sqrt{1-r^2}} > 2.02 \rightarrow \text{sort for r}$$

$$r^2 > \frac{2.02^2}{(41+2.02)^2}$$

$$r^2 > 0.044 \rightarrow |r| > 0.211$$

$$R\text{eject } H_0 \text{ if: } |r| > 0.211$$

From the data I received the following figures.

Cor(R_0,K_1)=0.134	Cor(R_0,K_2)=0.127	Cor(R_0,K)=0.179	Cor(R_0,K_{tot})=0.183
Cor(R_1,K_1)=0.227	**Cor(R_1,K_2)=0.355**	Cor(R_1,K)=0.128	**Cor(R_1,K_{tot})=0.256**
Cor(R_2,K_1)=0.151	Cor(R_2,K_2)=0.195	Cor(R_2,K)=0.067	Cor(R_2,K_{tot})=0.144

TABLE 4 CORRELATION TABLE

As we can see from above that Cor(R_1,K_1), Cor(R_1,K_2) and Cor(R_1,K_{tot}) are above 0.212 and therefore we should reject H_0.

(3) IS THERE A DIFFERENCE IN PERFORMANCE BETWEEN GIRLS VS. BOYS?

In order to test if girls are better than boys in getting good coherence scores we can set up the following hypothesis (g=girls and b=boys):

$$H_0 : K_{ig} - K_{ib} = 0 \ vs \ H_1 : K_{ig} - K_{ib} \neq 0$$
$$H_0 : R_g - R_b = 0 \ vs \ H_1 : R_g - R_b \neq 0$$

$$R_{ig} = \left[R_{ig}^1, R_{ig}^2, ..., R_{ig}^n \right]$$

We have two samples (likewise with K_i) $\quad R_{ib} = \left[R_{ib}^1, R_{ib}^2, ..., R_{ib}^m \right] \ m \neq n$

We use the normal distribution with an unknown mean and variance and due to the small samples (the small number of girls) we must use a t-test.

Test statistics:
$$\frac{\bar{R}_{ig} - \bar{R}_{ib} - \mu}{\sqrt{\dfrac{S^2_{R_{ig}}}{m} + \dfrac{S^2_{R_{ib}}}{n}}} \sim T_v \ , \ \mu = 0 \text{ under } H_0, \ v = dof.$$

$$v = \frac{\left(\dfrac{S^2_{R_{ig}}}{m} + \dfrac{S^2_{R_{ib}}}{n} \right)^2}{\dfrac{\left(\dfrac{S^2_{R_{ig}}}{m} \right)^2}{m-1} + \dfrac{\left(\dfrac{S^2_{R_{ib}}}{n} \right)^2}{n-1}}, i = 0,1,2$$

The results from testing this statistic is found in the tables below.

	R_0	R_1	R_2	K_1	K_2	K	K_{tot}
$\bar{X}$ (boys):	48.706	82.118	61.088	14.544	26.588	23.824	64.956
$\bar{X}$ (girls):	47.889	86.333	67.333	16.333	29.5	27.778	73.611
S^2 (boys):	1174.032	588.834	608.447	3.400	26.689	56.983	154.142
S^2 (girls):	1369.611	857.250	847.750	0.688	4.500	36.069	49.549

TABLE 5 MEAN AND VARIANCE

X (g=girls,b=boys)	v_x (dof)	t-value (from table with v_x)	T_v	Result	p-value
R_{0g}, R_{0b}	11.894	2.179	-0.060	Do not reject H_0	0.953
R_{1g}, R_{1b}	11.085	2.201	0.397	Do not reject H_0	0.698

X (g=girls,b=boys)		t-value (from table)		Result	p-Value
R$_{2g}$,R$_{2b}$	11.230	2.201	0.590	Do not reject H$_0$	0.567
K$_{1g}$,K$_{1b}$	30.133	2.042	4.260	**Reject H$_0$**	0.00018
K$_{2g}$,K$_{2b}$	33.074	2.035	2.569	**Reject H$_0$**	0.015
K$_g$,K$_b$	15.436	2.131	1.659	Do not reject H$_0$	0.117
K$_{totg}$,K$_{totb}$	22.845	2.069	2.732	**Reject H$_0$**	0.012

TABLE 6 T-TEST RESULTS

Since we are rejecting three of the outcomes, it would be nice to do a one sided hypothesis test to ensure ourselves that it is the girls that are better than the boys. For the two-sided test does not answer that in the affirmative.

The one-sided hypothesis test is then: $H_0 : K_{ig} - K_{ib} = 0$ vs $H_1 : K_{ig} - K_{ib} \geq 0$

The results of this test are found in the table below.

X (g=girls,b=boys)	v_x (**dof**)	t-value (**from table with** v_x **)**	T_v	Result	p-Value
K$_{1g}$,K$_{1b}$	30.133	1.697	4.260	**Reject H$_0$**	0.00009
K$_{2g}$,K$_{2b}$	33.074	1.692	2.569	**Reject H$_0$**	0.007
K$_{totg}$,K$_{totb}$	22.845	1.714	2.732	**Reject H$_0$**	0.006

TABLE 7 ONE-SIDED GIRLS VS. BOYS

REGRESSION PLOTS

Below you can see a regression plot from the selected data.
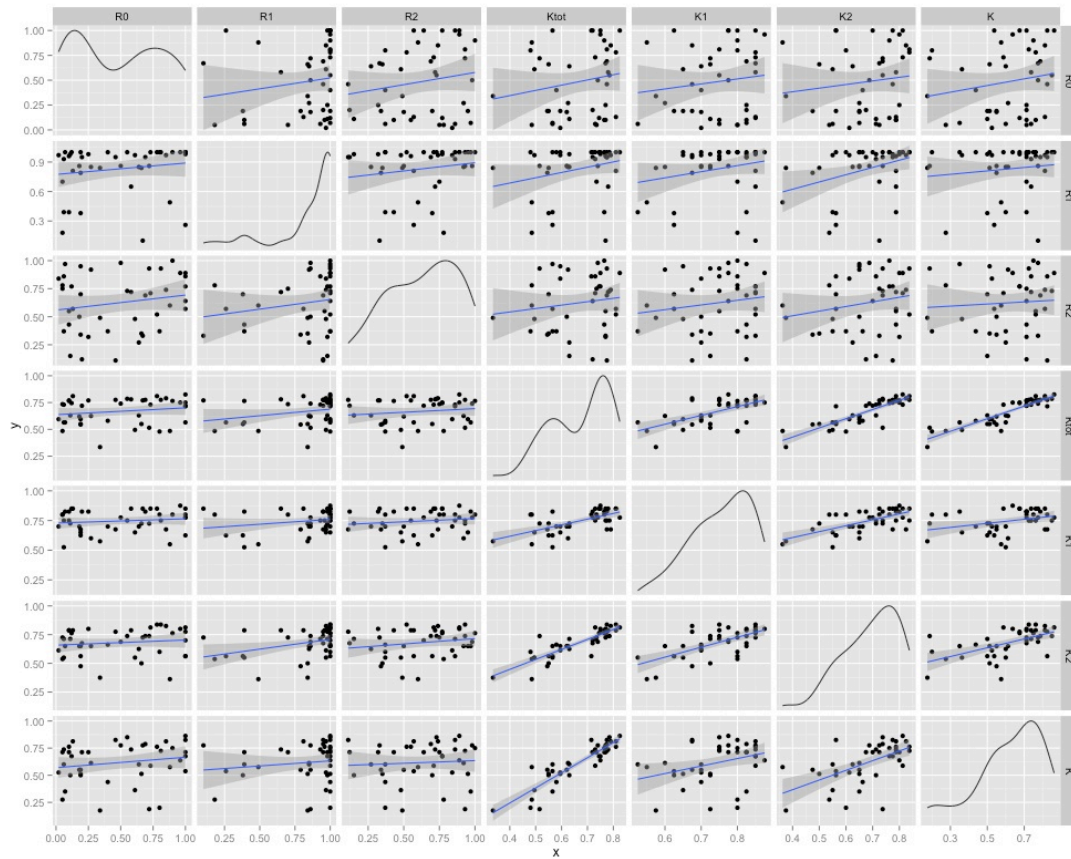
FIGURE 18 REGRESSION PLOTS

Discussion

(1) Can the students improve their HRV?

From the data that I have, we can see that the students can in fact learn how to increase their level of coherence and get better readings. Generally speaking the majority of students did better in both R_2 and R_1 than compared to R_0. Which shows that the students were able to have a more coherent state once they understood the physiopsychological principles necessary in order to get into the coherent state. This can be illustrated by the poor values of coherence at R_0 when compared to R_1. We can see that there is a drop in Z value from Table 3 at R_2 and this is due to the increase in challenge setting on the emWave Desktop software that makes it more difficult to get a good score (the criteria to have a PSD in the area around the resonance frequency of 0.1 Hz is more strict as discussed earlier). Professor Devdas Menon thought that it was too easy for the students to get a good reading on the lowest challenge setting (since so many did so well under R_1) and therefore decided to perform the R_2 reading with a more difficult setting.

This was not optimal for me, for it makes it difficult to compare all three readings R_0, R_1 and R_2 together since they are not on the same scale (and the algorithms for their differences are not published). Nonetheless we could still see that when R_2 is compared

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with R_0, the students did better even though the challenge was higher. The difference due to the challenge setting becomes apparent when comparing R_2 to R_1. The students did better on R_1 and were not able to score as well at the higher challenge level. This is of course obvious because in order to do well at higher levels of coherence, one has to practice getting into the state of coherence, which requires time.

In Figure 19 below we can see that a students spectrum average becomes better throughout the semester. In other words is more centered around 0.1 Hz. In this particular set of readings he actually had a stronger degree of power at R_1 than R_2 which means that the amplitude of his HRV reading was larger at R_1. As we mentioned earlier a large amplitude difference in HRV is positive (however there is a limit for how large the amplitude should be in order for the heart to function properly), where the heart can be thought of being a tennis player and is ready to pounce in any direction needed. With practice one can begin to maintain and increase the amplitude of one's HRV as well as it's degree of coherence.

Spectrum Average Progression

R_0 R_1 R_2
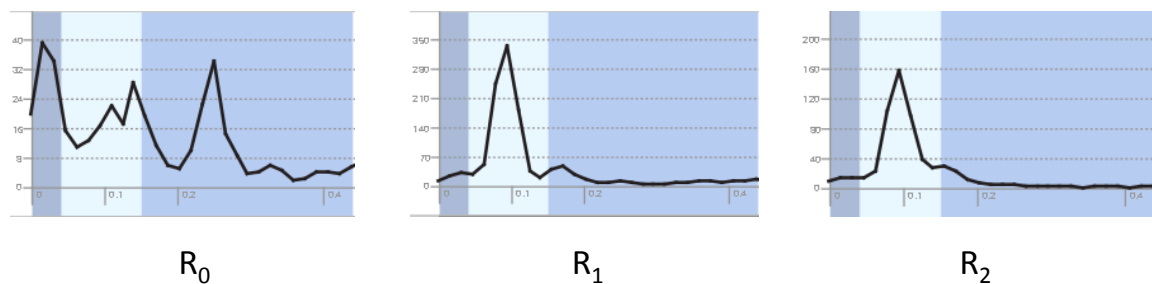
FIGURE 19 SPECTRUM AVERAGE PROGRESSIONS FOR A TYPICAL MALE STUDENT

(2) IS THERE A CORRELATION BETWEEN K_I AND R_I?

The second test that was performed was to see if there was any correlation between the R_i and the K_i values in order for us to say if coherence has an effect on performance. From Table 4 we see that indeed $\text{Cor}(R_1,K_1)$, $\text{Cor}(R_1,K_2)$ and $\text{Cor}(R_1,K_{tot})$ are correlated. It seems as if there was a relationship between the R_1 and the grades of the students in the class. A possible explanation for this may be that if the students were able to understand the principles that lie behind the concept of coherence during the mid-term, their grades would reflect this understanding in the future. The concepts that the students were tested on at K_1,K_2 and on their homework assignments (K), were all built on the fundamental understanding of coherence. Therefore if they were able to understand coherence at R_1, they could bring that understanding with them as they were introduced to new but progressive concepts later in the course.

However, I do not believe that we can conclude that it is only the HRV score that has an effect on one's grade. For it is possible to have a good HRV score but not

understand what is on the test and/or one may be able to have a good HRV score because one is well prepared for the material on the test and is therefore calm and steady during the HRV reading (which has more to do with studying than having a good HRV). But since the material on the test was related to the principles that underlie what is necessary to have a good HRV score, I think that the majority of students that understand coherence and were able to perform well at R_1, continued to do well the rest of the course.

(3) Is there a difference in performance between girls vs. boys?

From Table 6 we can see that we cannot conclude that girls were better than the boys in their R_i readings. This is logical for it is as easy for a boy than for a girl to understand and perform the principles that underlie coherence (for it has to do with the physiopsychological organization of the human being). Thus, boys and girls alike can learn these concepts without distinction. In other words, we can both learn how to breathe and think positively in order to get into the coherent state.

What is peculiar to notice is that from the data we can firmly state that the girls are definitely better than the boys at getting good grades. They perform better than the boys in K_1, K_2, K_{tot} and with a p- value of 0.11 they are better at K. It is hard to say exactly why girls are better than boys, but we can see that they are definitely better then boys when it comes to performing on tests. Maybe this has to do with the cultural necessity for them to prove themselves in such a male dominant society such as India. This may force or motivate them to work harder in order to study for tests but maybe not as much on homework. It also may have to do with the inherent mother nature of women to relate to the material of the Self-awareness course and they may be more in touch with their emotions and therefore have a better relation to the ideas presented. Another plausible reason for this distinction may be that there are so few girls compared to boys. If these tests were taken with a class that had a more similar amount of boys vs. girls, we may be able to get a more grounded explanation for why the girls did better. However, for me to speculate too much on why girls are better than boys may be a bit outside the scope of this paper. My main objective was to see if both boys and girls could learn the principles necessary to be able to understand the concept of coherence from the HRV readings, which they are equally able to do without distinction.

Regression Plots

From Figure 18 we see that there are some trends to the different plots (no trend would result in a horizontal line). The most significant trends have to do with the relationships between the different K_is which can be explained by: that if a student does well on K_1 he is likely to be a student that does well on K_2, K and K_{tot}. In other

words, good students perform well on all their assignments. That is why I believe there is a trend between these parameters. We can also see a significant trend from the R_1 graph and the respective K_i that we calculated under (2).

If we look at the graphs drawn in the along the diagonal of the figure, we can see some interesting features. These diagrams are the fitted distribution that sorts the observations according to their value, while the height of the graph depicts the number of observations found at those values. The first plot (R_0,R_0) seems to have two peaks. This may suggest that there are generally two types of students attending the course. The largest group of students score under 50% on the R_0 reading, while another smaller group of students do considerably better. In the (R_1,R_1) plot, we see that almost all the students did well on the R_1 reading. This coincides with the first hypothesis test that the majority of the students were able to learn and perform the concept of coherence. Many actually scored close to 100%. This trend was then broken during R_2 and is reflected in the (R_2,R_2) plot since the challenge setting on the program was set higher. Thus, the students were not able to score as well as they did at (R_1,R_1). The majority of students were over 50% but there were very few that got high scores on their R_2 reading.

The K_1, K_2, and K plots look about the same where the majority of students average at about 75%. But this trend of two peaks shows up once again in the K_{tot} plot. There seems to be two types of students; some that level out at about 50% while another larger group level out at about 75%. A possible explanation for these two groups of students may be the amount of attraction and motivation that the students have to the course. Since I was a participant in the class I could subjectively notice that there were generally two groups of people that were attending the class. There was one group (type A) like me, that was genuinely interested in the course and have had some exposure to the principles presented previously (self-observation, meditation etc.). Therefore when the initial baseline was taken at R_0, I think type A students scored pretty well (even though we didn't know what coherence was or how it was brought about). Throughout the semester, the type A people read all the books and literature that were apart of the curriculum, and participated actively in the discussions. Many of the students shared experiences where they had applied the concepts learned in the course to other activities in life. All in all, due to their attraction and motivation to the material, they scored pretty well in the end. Then there were type B people that attended the course, with little or no motivation other than to get an 'easy grade'. They attended the course simply 'to get by' and score some easy points from a course that outwardly seems to be easy to understand and to pass. It was generally type B people were the ones didn't do to well in R_0 and K_{tot}.

There were however, from my opinion, many students that started as type B students but throughout the semester became type A students. This can also be reflected in the R_1,R_2 and K_{tot} plots where more people scored higher towards the end of the course than in the beginning. I don't think that there was anybody that didn't actually enjoy the course, but surely some of them were less motivated to do all the homework and

study to as hard as the type A people. From the feedback that was given after the final exam, there were many students (about ten) that stood up and gave a speech to express their gratitude towards Professor Devdas Menon and team for providing such a lovely course. I think the majority of people in the class found it inspiring and worthwhile.

TO SUM UP

With this experiment we have seen that student can improve their HRV when exposed to the principles and technics necessary in order to do so. In this case 43 students were tested over a semester and there was a significant trend that suggested that the students were able to have better readings at the end of the course compared to the beginning. The last reading was taken at a higher challenge level that made it more difficult to get a good score, nonetheless the students still performed better than they did when the initial baseline reading was taken. There was a correlation between the R_1 reading and the K_1,K_2, and K_{tot} which may suggest that if the student was able to understand and perform the principles of coherence at R_1, they were likely to do well the rest of the course. A possible explanation for this is that, many of the concepts that are presented later in the course (for example the 'the box' and dimensions of the heart found in A.5) have the same underlying message as coherence and therefore the experience at R_1 set the foundation for the students to get a deeper understanding of the later concepts. Furthermore, there was no distinction between girls and boys concerning their HRV readings, which is logical because it is equally possible for a girl or boy to get into the coherent state. However, the girls got considerably better grades on the exams which may suggest that girls studied harder for the exams than the boys. The regression plots suggest that there are two types of students (type A and B) where type A people were genuinely attracted to the material and were motivated to do well in the course. While type B people were less motivated to do well, were more occupied with getting an 'easy grade', yet they did find the course valuable in the end.

If this course was to be held at NTNU, I think we would find a similar trend. We would get probably a distinction between A and B type of students and some would be more or less motivated to engage with the material. However, I think that the students would gain insights and access to knowledge that they may not stumble onto elsewhere that may inspire them to begin to practice coherence and begin to implement the breathing technics etc. when needed in stressful situations in order to maintain a more stable state of mind in innovative climates.

On a more personal note, to use HRV measurements alone as a tool to increase one's well-being, autonomy and authenticity in one's life is not sufficient. The emotional aspect of coherence must be taken into account. Students have to continuously attain understanding of the emotional aspects of the human being. For I have experienced

that often I may be feeling emotionally unstable, but still have a good HRV reading, and it is as if I can 'trick the system' when I understand how it works. At higher challenge levels this becomes more difficult of course and the distinction between emotional coherence and physical coherence becomes clearer. So the validity of using HRV alone to detect one's emotional state of mind is not an exact science at this point. However this is an interesting development that is worth being aware of when talking about the effects of positive and negative emotions on the body.

A GLANCE AT HUMAN VALUES

Ultimately, the way we act in an organization or in our innovative climates is based on how we attribute value. All our actions are essentially based on a value judgment that we make in real time according to our value system. We make these choices of action thousands a time a day. For instance we make a value judgment when thinking to ourselves should I reply or not reply that email that just came in? Should I to stop by my superior's office with that question I had or will that be pointless or too embarrassing? Should I choose to help this colleague or friend that has asked me for help or not? Whatever the situation may be, it boils down to a choice of moral action. Moral action is based on two things, the motivation for that action and one's knowledge of the system of values attributed to that moral action. So what is it that determines all this? Well, this is what we call human values.

Human values and ethics is a vast topic, but nonetheless is something that we have to learn about to ensure that our actions are for the benefit whatever we find to be valuable. What *do* we find valuable? Aristotle wrote "that happiness was the supreme good and the goal of life was to attain happiness. Moreover he taught that happiness was attained by living a virtuous life and being a good person."[21, p. 363] From the Human Values course in Bhutan I learned that "basically all of us are aspiring to be happy and whatever appears conducive to our happiness becomes valuable to us. Values form the basis for all our thoughts, behavior and actions."[22, p. 4] I don't think that anybody would disagree that we want to be happy. That is the whole point for why we are here, isn't it? So if this is what everyone one wants, then why is this so hard for us to accomplish in our lives and more specifically in our innovative climates? I believe that this largely has to do with a misunderstanding (either conscious or unconscious) of (1) how we make our value judgments, and (2) what we as individuals view as the most valuable thing to strive towards in order to attain our happiness.

Now this is a complex subject, nonetheless it needs to be explored by us as mechanical engineering students so that we have *at least* made ourselves conscious of what we find to be valuable as we enter into the business world. For as of now, we usually don't think about this, and are largely unaware of what we find valuable in our lives. Lets explore human values a little from the perspective from the professor of mathematics William Hatcher, which I found to be most insightful on the subject. To understand his logic has required me to spend hours in contemplation and study but I will try only to bring forth the gist of it here. For a more comprehensive understanding this I must refer the reader to the reiteration I have made of two of his articles found in A.6, or to his books and lectures found at the William S. Hatcher Library on the Internet. For it would be a huge thesis if I were to disclose all his proofs and definitions in the conceptual framework he has created. But I will do my best, to sum it up here. Lets get started.

No matter what the value system is, it holds to the logical principle that lower values are means and higher values are ends. And therefore immorality is to sacrifice higher values for lower values. In other words, make lower values ends and make higher values means. So as individuals that are partaking in an organization, it is crucial to understand what is the most important, so that we don't mix up ends and means and become the source for unhappiness and spoil our innovative climate.

William Hatcher's analysis of human values shows us that the *human being* is the most valuable thing in creation and thus in order for us to attain our happiness, we have to value the human being more than anything else. What this means practically is that there is nothing in creation, an idea, a model, a belief system, concept, principle, product etc. that is more important than a human being. We could say that I could take my most valuable idea, ideal or innovation for that matter, and the homeless man I see on the street is more important than that idea. Thus, all the value judgments we make should be in relation to this truth of the value supremacy of the human being. If we act in accordance of this value supremacy we will gain our well-being (happiness), autonomy (our moral courage and motivation to do what is right independent of others) and our authenticity (our capacity to love humans altruistically for we value them the most). If we choose not to act in accord with the value supremacy of the human being, we loose our well-being, autonomy and authenticity and inflict harm to ourselves and suffering to others.

Bagaria explains this in a similar way by reminding us that no one has the *intention* to make other people unhappy, for we all agree we want to be happy. But the unhappiness we inflict upon others is due to the lack of *competence* of how bring the other happiness.[22] When we inflict harm or unhappiness to others we devalue them and do not hold to the end that they are most important thing in creation. Thus our actions hurt the partners involved because we sacrifice our relationship for something else. Furthermore, this value supremacy of the human being is essentially what 'the box' represents. Where we value humans more than objects. If we devalue the station of a human, we enter 'the box' which results in suffering on both parts.

 The way that we express our value to something is by loving it. The more we value something, the more we love it. Now that we know what is the most valuable thing, namely the human being, it is logical that we are so touched when we see acts of altruistic love. For acts of altruistic love is the ultimate sign that we have understood the value supremacy of the human being. So when we look at our heroes of history like Gandhi, Martin Luther King or see acts of sacrifice where people will selflessly put their own life at risk by saving others from a passing train or whatever it may be, it touches us. Because this act shows that this person risked everything in order to value the life of the human being. In less extreme cases as these, altruistic love can be shown by giving help or love to whomever may cross your path. For at that moment you are

acting in accordance with the value supremacy of the human being, for the person right in front of you, is more important than anything else. Which, interestingly enough, is what Adam Grant said was the most important factor for effective corporate culture, namely to give help.

In order to understand how we can begin to learn how to live our lives in accordance to the value supremacy of the human being, we need to understand a little bit more about our basic human nature so that we can realize how our value judgments are made. Hatcher explains that the fundamental characteristics of human nature can be reduced to our consciousness, heart, mind and will. These are of course not all the characteristics of man, but the characteristics of man can be reduced to be at least these three things. Furthermore, the combination of these characteristics is the source from which all our value judgments flow.[6] We are all born with the capacities and as we grow older these capacities develop and become abilities as we go through the process of self-development. In other words, when we interact with our social and material surroundings we develop our capacities of the heart, the mind and the will. However this process is not automatic and doesn't happen casually. We have to apply conscious effort into developing these capacities as abilities. As these abilities increase we increase our *internal power* or *our power over self.*

This is very interesting because internal power is very different from external power, and we usually confuse the two. Generally speaking internal power is to have the understanding and motivation to act in a way that will increase one's autonomy, well-being and authenticity. In other words, you have and understanding of what is the most valuable decision to make, regardless of external pressure, and have the courage to perform that action. While external power is to have power over others (or the power to make them act in a way you want them to). External power is what we usually think of when we say that someone is powerful, like politicians, administrators, bosses etc. An externally powerful person is someone that has control over (or is assumed to have control over) the social recourses to provide punishment or reward (or holding back reward) from less externally powerful people. And as humans being needful creatures, we think that by increasing our external power we will attain happiness for we can compel others to satisfy our needs. The fault with this logic however, is that we do not achieve happiness by simply having external power; we

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- [6] Consciousness- the existence of a subjective world of conscious inner states within each individual
- Mind- the capacity of this conscious subjectivity to reflect or model, if not perfectly at least significantly, the structure of the world outside our subjectivity
- Heart or affectivity – the capacity to feel certain emotions or subjective sensations, most particularly the capacity to experience the emotion of altruistic love
- Will and intentionality- the capacity to contemplate and execute certain courses of action

achieve happiness by living in accordance with the value supremacy of the human being. And this has to do with one's inner power (developing one's heart, mind and will). External power says nothing about one's internal power and it is our *internal power* that allows us to be happy. For if we are internally powerful people we have the power to make value choices that are in accordance with the value supremacy of the human being, and thus continue to increase our well-being, autonomy and authenticity.

We see time and again people in powerful positions making cowardly decisions in order to 'save themselves' (or hold on to their external power), like captains of sinking ships making fainthearted escapes or bosses making poor value judgments leading companies bankruptcy (like for instance with Enron). In less extreme cases we see people climbing over each other in an attempt to get a better job, more recognition, seal the deal, information hoarding, bad-mouthing and all the other symptoms of ineffective innovative climates discussed in the beginning due to poor value judgment. In short, we enter 'the box' if we don't have the internal power to keep us out.

Power in its-self is morally neutral. For instance there is nothing wrong with a father having power over his child. However, what have to understand is that there are relatively good and relatively bad ways in which we can use our external and internal power. And in which way we decide to use our power is where the concept of morality comes in. In the case of the father child relationship, the father can use his power to enhance the child's well-being and autonomy, or he can use his power to keep his child under a constant feeling of fear and submission. These good and bad acts that we perform are based firstly on our knowledge (more specifically the understanding of the value supremacy of the human being) and secondly on our purity of intention or the motivation that we have for our actions. It is the purity of intention that is the most important (which Bagaria alludes to earlier by saying that we all *intend* to inflict happiness onto others however we are not always *competent* enough to deliver) for if our intentions are pure, we can learn from the mistakes that we make in ignorance, and thus correct our faults and do better next time. However, if our intentions or motivations are weak and/or worse consciously misdirected (not in accord with the value supremacy of the human being), no matter how much we increase our knowledge, we will not become doers of good. This is because we are either consciously and actively intending evil or we do not have the motivation or moral courage necessary to perform good in the face of resistance or opposition.

Hatcher sums up this truth by the slogan: "good and evil is a potential that lies within the heart of each individual."[23] This makes it clear that there are no "evil people" that are solely responsible for all the human misdeeds in the world. For if there were, we could structure society in a way that would prevent them from inflicting evil acts. But as we can see from this logic, the problem of morality is ultimately localized within of the individual, however it is universal and shared by all human beings. Everyone is responsible for their actions and is ultimately the source of good and evil at any given time based on how they choose to use their internal and external power.

This is why it is pointless to point out into society and say that it is only a certain group of people are the cause of all pain and suffering in the world. For in truth we all contribute relatively to the good and evil in the world with every value judgment we make. And depending on the quality of those value judgments, we are either contribute good or evil to the world every second of the day (likewise in our innovative climates). Furthermore, everyone has the capacity to increase their inner power if they so choose to do so. In other words, we cannot say that a man that continuously performs unkind deeds is, underneath it all, actually a loving and kind person. The fact of the matter is that he has not yet developed his intrinsic capacities of heart, mind and will in alignment with the value supremacy of the human being, which would result in an increase of internal power. That's why when Adam Grant suggest that we screen out 'takers' from our organization, we can actually look for behavior that is not in a accord with the value supremacy the human being and spot people that have not yet developed their internal power. Another way we could express the attributes of a 'taker' is to say that he has not yet developed his internal power to realize that altruistic giving is the most effective way to attain happiness.

However, what we tend to do as 'takers' is create an ideology[7] in our minds (where we create a system of ideas and value them more than value supremacy of the human being, i.e. do not give). Thus by believing in this ideology we have a distorted understanding of reality, and value our ideas more than the value supremacy of the human being. This is similar to when we are in 'the box' and from this perspective we are willing to sacrifice human relationships (ends) to support our ideology (means). In other words we have created a system of thoughts in our minds and value them to be more important than the human being. Which is unfortunately really easy to do, if we are not aware of this. Say I am working on my thesis and need some help with a problem. However, I am so stressed out about my thesis that I feel that it is the most important thing in the world, and thus when I encounter someone that is willing to help me, I have this ideology in my head (that I value my thesis more than I value the person that is willing to help me). From this perspective, in my encounter with the helper, I give them no love, gratitude or compassion (which they deserve and would be there if I would have valued them the most) and I only *take* the information I need from that individual rather than giving them gratefulness and praise in return for their knowledge and understanding. This may result in both individuals feeling bad, for the giver feels exploited and unless I receive any significant information for me to complete my thesis, I may feel that this encounter was pointless and as a leave, I continue to live in my box. And being in 'the box' is not constructive to my thesis or to the people around me.

How often is it that if we truly value the person we seek help from, and are keenly interested in their insight, that after the meeting with them we both feel that we have

7 Please refer to the A.6 to understand this topic in more detail.

benefitted from the meeting? Even though the giver was held back from his own productivity? A possible reason for this mutual happiness is due to the firstly the altruistic service that the giver is displaying by giving help, in addition to the gratitude and thankfulness that the receiver feels in response to this selflessness. And thus we have a win-win situation where the giver feels good for giving and the receiver feels good and thankful for getting help. There's love all around and love is inexhaustible.

However as takers we seek external power over others because we don't value their intrinsic nature and unconsciously think that the more external power we have, the more happiness we will attain. This leads us to competition (dominance over others) and other sorts of power games that are not constructive to our well-being, autonomy and authenticity. We argue that competition leads to the pursuit of excellence and is necessary for communities to function at their fullest capacity. However, when one explores the concept of competition more deeply, we can see that competition can lead to the lack affection towards our opponents. When there is affection between individuals we are concerned with each others happiness and thus, indirectly their growth and development. However, when we compete with each other we are more occupied with the concept of dominating our fellow contestant rather then supporting their advancement. This creates a conflicting feeling within us in our working environments, where we are (to some degree) competing against our friends at school or colleagues at work. Competition for external power is always flavored with fear for there is always a risk that someone more powerful may come along at any time and take all our 'hard earned' power. If we were truly showing affection towards one another we would not be competing against each other's but rather concerned about our mutual fulfillment of attaining happiness, and through that pursue excellence.[8]

What we tend to forget as takers, is that no matter how much external power we have, that power will never be the source of love (which in turn is the source of happiness for it is the appropriate expression of the value supremacy of the human being). You cannot will yourself to love someone. Take for example a child, you cannot will that child to love you. You have to consciously apply the circumstances necessary for love to flourish and than with time and conscious effort the love between you will come. Similar to in the first chapter when Leifner and Steinert said that you "have to let change happen," you cannot force people to be innovative with no space and freedom and expect something beautiful to come out of it. Innovative climates need encouragement and support, or in short need love. This knowledge and understanding of how to implement such circumstances (that allow for love to flourish) comes from the inner power of an individual, not the external.

This means that we need to start to become more aware of the process of increasing our internal powers. This is done through the process of self-development, which is by

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[8] Inspired by [22]R. Gaur, R. Sangal, and G. Bagaria, *A Foundation Course in Human Values and Professionals Ethics*: Excel Books India, 2010.

continuously and *consciously* exercising our actions (based on our heart, mind and will) in accordance with value supremacy of the human being. In other words consciously making our value judgments at every single moment of the day, in our workplaces or at home, with the value supremacy of the human being in mind. Through this process we can increase our knowledge of how to live in accordance to the value supremacy of the human being, and through our purity of intention we can learn from our mistakes, correct our faulty knowledge and continue developing ourselves.

From my perspective what seems to be the problem with us in our innovative climates is we are not conscious of the value judgments we make at any given time. In other words, we are not aware of the consequences of our value choices in our relationship to the others in the group. When we make choices that are not in accordance with the value supremacy of the human being (by being 'takers' or pursuing external power, blaming, not giving encouragement etc.) we are not aware that we are stagnating our inner power development (which results in a loss of well-being, autonomy and authenticity) by entering into our 'boxes' and justifying them with ideologies in our mind. (Ideologies like I need to be the best, every man is for himself, I don't have the time to help him right now, this doesn't benefit me so why should I care etc.) Ultimately we are spreading in unhappiness to others by not making good value judgments, and this in turn spoils our innovative climates.

The consequences of these immoral actions are not immediately detectable due to time, and often are not aware of our misdeeds until its too late. Some examples of this may be when we slip into drug addiction or loose the respect of a child, spouse or colleague because we have unconsciously been abusing them over a period of time. How difficult it is to notice that we are slowly slipping into such a fate, while the grief of such a loss may last for years.

I believe that this continuation of mistaking means for ends can be gradually more aligned with the value supremacy of the human being, if we spend more time sharing and learning about human values with others. Through this process of consciously discussing and learning about the process of self-development we can all increase our internal power. The reason why we often make poor value judgments in innovative climates is because we are not aware of the importance of developing our inner power and are not aware of the consequences of not focusing on it. Through my five-year experience here at NTNU, I have yet to have a course that directly addresses this topic, and as we now understand, the process of self-development is not something that happens automatically but has to be consciously pursued.

THE VALUE JUDGMENT MODEL

In order to help us begin this process of self-development I have tried to make a diagram that illustrates the process of making value judgments based on the understanding that I have today. This is of course fundamentally rooted in William Hatchers explanation of this topic, but I have just tried to make a model out of it.

The Process of Self-development
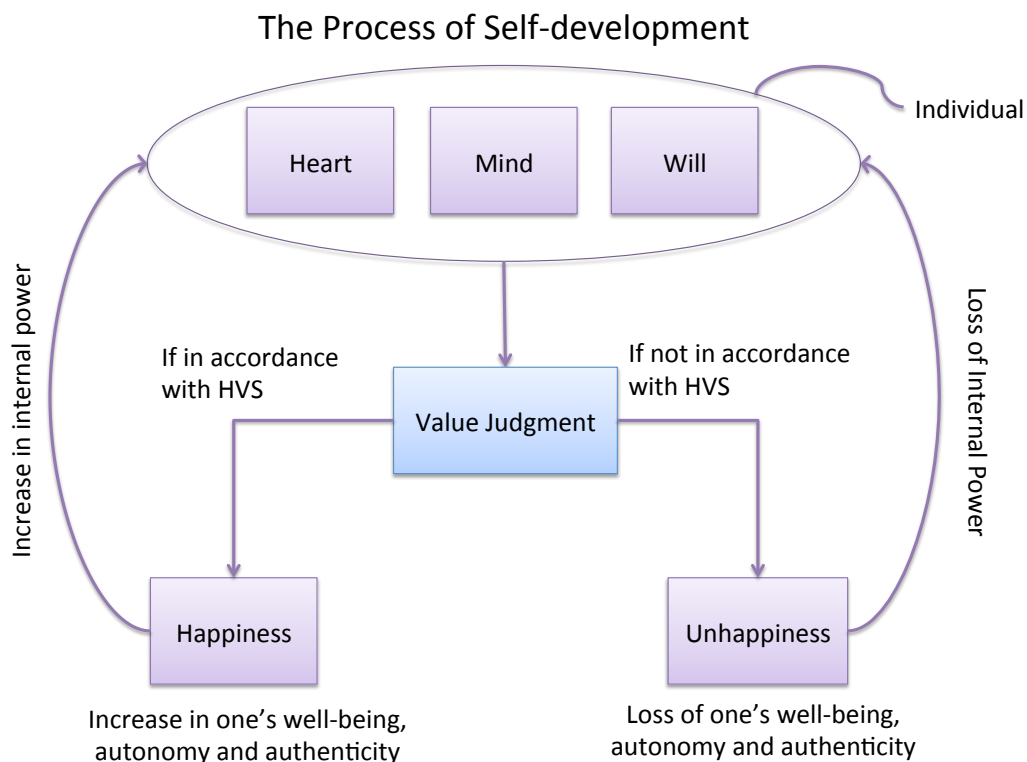
FIGURE 20 PROCESS OF SELF-DEVELOPMENT (HVS =HUMAN VALUE SUPREMACY)

As we can see at the top we have and individual with the intrinsic human capacities of heart, mind and will at whatever stage of development the individual is in. These three capacities combine to make a value judgment (a choice of moral action) which can or cannot be in alignment with the value supremacy of the human being. If the act is in accordance with the value supremacy of the human being that will ultimately lead to mutual happiness and an increase in well-being, autonomy and capacity to have authentic relationships. The result of this experienced action is then fed back to the capacities of heart, mind and will and increases one's internal power. The more one consciously uses one's capacities of heart, mind and will, the more one can increase the one's ability to use one's heart, mind and will. In other words, the more one learns, the more one learns how to learn and the better one becomes at making value judgments.

The other branch represents value judgments that are not in accord with the value supremacy of the human being and thus leads to mutual unhappiness i.e. loss in well-being, autonomy and capacity to have authentic relationships. The result of such an act feeds back to a hopefully only temporary decrease in one's internal power. If one's intentions were pure, one can exchange one's faulty knowledge with what one has newly learned and continue to make as accurate moral judgments as possible based on one's abilities at any given time.

In real life situation what this means is that at any given moment where a decision of action is to be made we refer to our inner capacities of heart, mind and will[9]. We can first contemplate about the issue weighing what we find important based on our knowledge of the subject with our minds. Consultation with others may also be a helpful tool at this point in order to grasp the issue from different perspectives. Then after centering in on a decision we can begin to look inwards to see how we 'feel' about the issue or how attracted we feel to the decision. In this way one is observing the hearts contribution to the decision. If we feel that we have arrived at a decision that we are attracted to (even though it may seem like an impossible accomplishment) and our will power is then engaged with the motivation to follow through with that decision; then perform the action and hope that it is in accordance to that value supremacy. And act in alignment with that decision until you learn more information or gain insight that that can allow you to reiterate the process again. A continuous conscious reiteration of this process with every single choice we make throughout our daily lives is what will ultimately lead to our self-development. If the decision that we made turns out to be hurtful or wasn't the right thing to do; we should forgive ourselves and the people involved for that action. For at that time, we didn't have the ability of the mind (knowledge of the subject) and/or heart (not an attraction that is in alignment with the principle of altruistic love) or the degree of control over our will necessary to understand the problem thoroughly. Or to put it another way, we didn't have the *competence* to perform the right thing. We have to pick ourselves up, learn from our mistakes and continue down the path of self-development every second of the day.

However, as we walk along this path of self-development there are endless shades of grey for why and how we should make our value judgments. That's why it's so important that we gather together and talk about these subjects so that we can learn

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[9] In order to make conscious and valid value judgments, one has to make sure one is out of 'the box' and that one's pulse is to far away from ones coherent state. For if not, it is more important to focus all one's energy to get out of 'the box' by practicing coherence, going for a run, talking to a friend that is out of 'the box', singing or whatever one usually does to get out of 'the box'. However, even the decision for how one is to get out of 'the box' is made from the combination of the heart, mind and will. But in cases where one is extremely emotionally distressed, the quality of ones value judgments may not be always be in alignment with the value supremacy of the human being. And one should bare this in mind when making such decisions under such circumstances.

from each other's experiences and help each other in increasing our value judgment abilities. The process of observing our value judgments happens in real time at every moment, and has to be consciously observed with regard to our heart, mind and will for us to develop. If we are not aware of this process, we may be making our choices based on the ideologies we have in our heads, and completely unaware of the crucial process of self-development that ultimately is the source of our well-being, autonomy and authenticity in our lives.

In light of this, I believe the main issue that we have within innovative climates is not being aware of the importance of our hearts. We are not taking responsibility for our individual actions at each moment and are not aware of the consequences for not acting in alignment with the value supremacy of the human being. Ultimately what happens is that we enter 'the box' or we deliberately seek dominance over others, by not valuing their intrinsic nature and by continuing to sacrifice ends for means we loose our capacity for altruistic love. We forget that our relationships are more important than anything else. The result of not showing altruistic love is not willing to help, which as we saw from Adam Grant ultimately leads to unhealthy corporate culture.

In conclusion I feel that we as an institution we have to acknowledge the importance of developing our hearts, as well as our minds so that we can continue to be productive and innovative engineers. If we help each other learn more about the qualities of the heart, I believe we can begin to see a shift from being 'takers' or 'matchers' which ultimately is the result seeking external power, while if we learn more about the concepts behind altruistic love we begin to see a shift towards becoming 'givers'. However, in order to learn more about this we have to start to prioritize human values in our educations for as of now, it is outside the curriculum.

CONCLUSION

I started this journey by looking at what innovation is and why it is important. Innovation is bringing something into existence and into distribution that did not exist before. It is a necessary and crucial process for a corporation's success and for our society as a whole to develop. In order for a corporation or group of people to be innovative there are some key components that allow for creative climates to flourish. Some of these include trust, openness, space, support and freedom, which all basically have to do with how we treat each other in our organizations. Adam Grant adds to this and sums up these components by saying that corporations that *give help* ('givers') perform better and have better cultures than those that have 'taker' or 'matcher' cultures. He suggests that corporations need to apply strategies that supports giving in our organizations, for today, givers have the disadvantage of being exploited or risk putting their own productivity at stake.

This disadvantage is obviously a contradiction; for we want to have productive and innovative climates in our organizations, but in order to attain these climates we need openness, trust, support, or in short; give help. However most organizations are not structured in a way that acknowledges giving help (for they are far more individualistic than that), which ultimately leads to unhealthy, non-innovative cooperate climates. This is why it is so crucial to start acknowledging the importance of giving help and that we can begin encouraging each other and turn things around. And as we remember, "the word encouragement comes from the Latin word 'cor' (heart), and means 'to give heart'."[13]

In order to understand what it means for engineers to become positive contributors to innovative climates, or to give heart, I have necessarily had to touch upon an ocean of topics and themes from the softer sciences. Firstly, the model from Arbinger Institute explains that when we deceive our hearts we enter 'the box' and get a distorted view of reality. From this viewpoint of 'the box', our actions cannot bring forth fruit for we are prone to blame, backbiting and pessimism. We have a 'heart at war' and stop viewing people as people but view them as objects. We spend most of our time faultfinding and apply quick fixes to what went wrong rather than maintaining our relationships and making things go right.

Secondly, I realized that in order for someone to consciously contact their heart, one has to practice and understand the concepts behind coherence. I learned that by entraining the breath and the heartbeat I can increase my capacity to handle stressful situations and be more resilient as I meet resistance. I have become aware of some of the psycophsiclogical benefits of having a healthy, coherent HRV and I also conducted an analysis of experiment with 43 students from India. From this analysis I found that students are able to learn the concepts of coherence throughout a semester and is a helpful tool for students to get in touch with their hearts.

Finally, I studied an analysis of human values and power seeking where William Hatcher explains how we unintentionally inflict cruelty by not understanding the value supremacy of the human being. We conduct our actions by utilizing our heart, mind and will capacities and ultimately the choice to perform good or evil resides in the heart of the individual. If we act in accordance with the value supremacy of the human being we increase our autonomy, authenticity and well-being, however if we choose not to, we stagnate the process of self-development. A result of the self-development process is that we increase our internal power, which is fundamentally different from external power. Internal power is power over self, while external power is power over others. Ultimately it is internal power that can direct a human to make valid value judgments which leads to happiness. We can say that the only thing an individual has truly control over is his inner power for external power can be taken away from a more powerful person at any given time. However this internal power is not as noticeable as external power, and we therefore we can get confused and try to increase our external power in order to satisfy our inner power needs. Through seeking external power we create ideologies in our minds. We legitimize immoral acts for we value our ideas about ideas, more than we value our fellow man and this ultimately leads to unhappiness within ourselves and within our relationships. And this I believe is the source of the problem for why we cannot maintain giving cultures in our organizations.

What we can conclude from all this is that ultimately, it's the small choices that every individual makes every step of the way through life and in the workplace that cause either good or evil. Creative and innovative environments suffer greatly when there is an absence of positive and helpful atmosphere. The reason why there is not a positive and helpful atmosphere is because we are not taking responsibility for our small actions and we are eventually led to self-deception and other acts of immorality. This causes us to enter 'the box' by betraying our hearts and ultimately we loose our well-being, authenticity and autonomy. We can't see the consequences of these actions before its too late, since the damage is often not immediately detectable (due to time) and continue sacrifice ends for means in an unconscious attempt to achieve happiness. In such cases the atmosphere in our relationships (either at the workplace or at home) turns sour, and since we are not aware of the principles that our behind this soured atmosphere, we do not have the internal power to turn things around.

Now however, we have begun the process of setting a foundation and have a broader understanding of the principles that are necessary to have a creative and helpful atmosphere. We can use models like 'the box' to help us acknowledge what state of mind we are in and realize that our natural state is to be out of 'the box'. We can admit to our colleagues or friends that we have been in 'the box', ask for forgiveness and eagerly take measures to make it out. In order to get out 'the box' we need help from others that *are* out of 'the box'. Being in 'the box' is a sign that we are viewing people as objects rather than people and are not acting in accordance to the value supremacy of the human being which is fundamental flaw of our logic and therefore

have created an ideology in our minds. Understanding these ideas are necessary for engineers to be able to contribute positively to innovative and creative climates.

If these principles are studied deeply, I believe that we can make more valid value judgments and in the process our internal power will increase as we encounter new situations in our lives. However, I feel that since human values is not prioritized in our education, we are ignorant of the consequences of our immoral actions and are unconsciously destroying the potential for helpful and creative atmospheres. It seems as if in engineering we are only focusing on the capacities of our minds and our will. We are then missing a fundamental component of the process of making value judgments, namely our heart. Which is the most important capacity to develop for it is what allows us to give and receive altruistic love. Ultimately the sign if we actually are living in accordance to value supremacy of the human being is if we are practicing altruistic service to the people around us. We become 'givers' and contribute to that culture in our organizations and relationships.

I hope that with this thesis I have been able to answer my research question and provide the reader with a way to acknowledge if they are in a noncreative state, namely 'the box'. With this they can admit and apologize to others that they have entered that state of mind but wish to as quickly as possible get out of it. I have shown a method for improving their resilience from entering that state by practicing coherence. With continuous practice, one can begin to feel one's heart from within and start to notice its reactions to situations without, and thus have more conscious control over one's heart capacity. Finally, I hope that the model of the process of self-development can be used as a helpful tool that can guide one's value judgments in real time and as one becomes increasingly aware of the results of one's value judgments, one can increase the capacities of heart, mind and will and thus one's inner power.

CLOSING REMARKS

I feel that this topic of innovative climates and our relationships within them is extremely important for us as Mechanical Engineers. For as we continue into the business world and rise through the ranks of our corporations; we quickly realize that we have a lot of external power. We will be sitting around round tables, making value judgments: drill- not to drill, buy- not buy, build- not build. We will be making new products, building new buildings, new companies, new cities. We will have power over millions of kroner and responsibility for many employees and their families. But as we now understand, external power has nothing to do with internal power. How can we trust a man that hasn't thought about his internal power? How will you know that during their business meeting consultations, their hearts will give them the value judgment that, to the best of their ability, benefits everyone- not just satisfies the goals for next quarter? This is troubling for me, for there is a continuing flow of business cases where, deceit, corruption, selfishness and greed are the underlying message, and

we seem to be doing this in an attempt to increase our external power which doesn't lead to happiness.

At the end of the day it all boils down to me and my choices. Do I want to contribute to a positive, creative, innovative atmosphere or not? Will I be able to put my issues and assignments aside when a colleague comes to my desk for help? Will I be able to keep my cool when the printer doesn't work or when the project turns out to be a complete failure? Will I be able to forgive my friend who unjustly blames me for the failed project and backbites to my superiors? Or when the heat is on, will I have the heart to stand up in a meeting with the board of directors, and disagree with the direction we are going in? There is absolutely no way that I will be able to do that if I do not continuously and painstakingly occupy myself with the process of self-development. If we want to change our cooperate climates to a more innovative and creative place *we have to increase our internal power*. To do that, were going to have to make a choice: To give or not to give.

APPENDIX

A.1 "Self-betrayal"

Self-betrayal definitions from [16, p. 208]:

1. An act contrary to what I feel I should do for another is called an act of "self-betrayal."

2. When I betray myself, I begin to see the world in a way that justifies my self-betrayal.

3. When I see the world in a self-justifying way, my view of reality becomes distorted.

4. So—when I betray myself, I enter the box.

5. Over time, certain boxes become characteristic of me, and I carry them with me.

6. By being in the box, I provoke others to be in the box.

7. In the box, we invite mutual mistreatment and obtain mutual justification. We collude in giving each other reason to stay in the box.

KNOWING AND LIVING THE MATERIAL [15, p. 102]

- Self-betrayal leads to self-deception and "the box."
- When you're in the box, you can't focus on results.
- Your influence and success will depend on being out of the box. You get out of the box as you cease resisting other people.
- Don't try to be perfect. Do try to be better.
- Don't use the vocabulary—"the box," and so on—with people who don't already know it. Do use the principles in your own life.
- Don't look for others' boxes. Do look for your own.
- Don't accuse others of being in the box. Do try to stay out of the box yourself.
- Don't give up on yourself when you discover you've been in the box. Do keep trying.
- Don't deny that you've been in the box when you have been. Do apologize; then just keep marching forward, trying to be more helpful to others in the future.
- Don't focus on what others are doing wrong. Do focus on what you can do right to help.
- Don't worry whether others are helping you. Do worry whether you are helping others.

The Better-Than Box

View of Myself:
Superior
Important
Virtuous/Right

View of Others
Inferior
Incapable/
Irrelevant
False/wrong

Feelings
Impatient
Disdainful
Indifferent

View of the World
Competitive
Troubled
Needs me
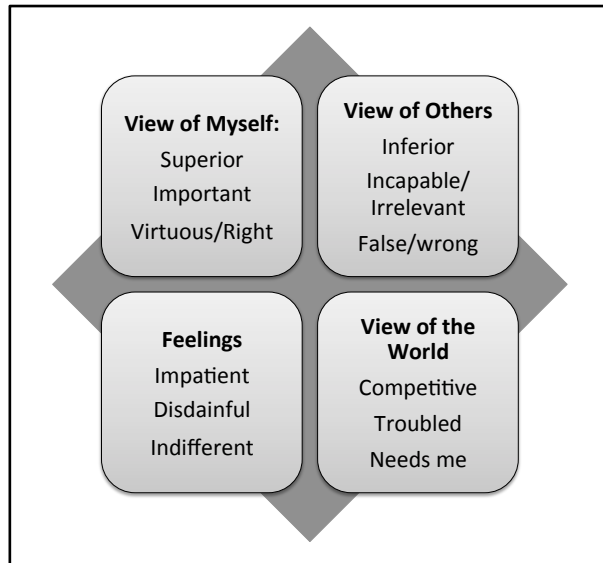
FIGURE 21 THE BETTER-THAN BOX REMADE FROM [16, P. 113]

The Must-Be Seen-As Box

View of Myself:
Need to be well
thought of
Fake

View of Others
Judgmental
Threatening
My audience

Feelings
Anxious/Afraid
Needy/Stressed
Overwhelmed

View of the World
Dangerous
Watching me
Judging me
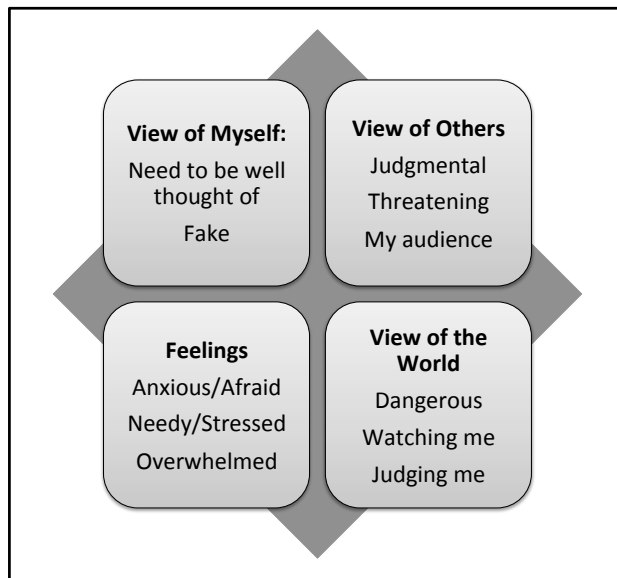
FIGURE 22 THE MUST-BE-SEEN AS BOX REMADE FROM [16, P. 120]

The I-Deserve Box

View of Myself:
Meritorious
Mistreated/ Victim
Unappreciated

View of Others
Mistaken
Mistreating
Ungrateful

Feelings
Entitled
Deprived
Resentful

View of the World
Unfair
Unjust
Owes me
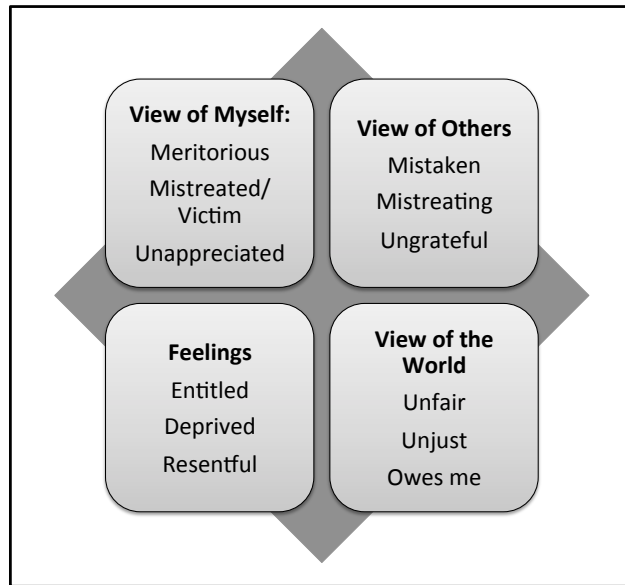
FIGURE 23 THE I-DESERVE BOX REMADE FROM [16, P. 116]

The Worse-Than Box

View of Myself:
Not as good
Broken/Deficient
Fated

View of Others
Advantaged
Privileged
Blessed

Feelings
Helpless
Jealous/Bitter
Depressed

View of the World
Hard/Difficult
Against me
Ignoring me

FIGURE 24 THE WORSE-THAN BOX REMADE FROM [16, P. 124]

A.3 CREATIVE STRESS[10]

Now that we have a understanding of self-deception and the process of having a 'heart at peace', it may be necessary to go a little deeper into some of the feelings that arise while were in the box. This is because the emotional complexity and the state of mind that 'the box' is trying to elucidate requires a little more understanding in order to be able to get out of 'the box' as quickly as possible. A concept that I would like to bring forth in this regard is the energy that often arises while one is in 'the box' and we tend to lump this complex emotional state into one word, namely 'stress'. Stress is a source of energy, and if used appropriately, can be extremely conducive for the development of personal character, awareness, productivity and creativity. The idea of using stress as a transformative power rather than viewing it as a nuisance or paralyzing condition (which one tries to avoid at all costs), is a rather unusual outlook compared to the traditional notion of the word. Therefore I will try to shed some light on the positive aspects of how to turn negative stress into 'creative stress' to help us use that power to get us out of 'the box'.

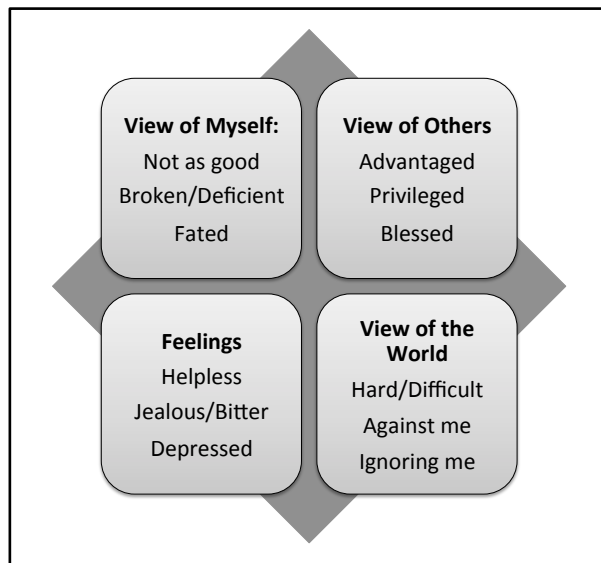We have discussed the state of being that surrounds us as we enter or are in 'the box'. Our entire view of life is somehow fogged up and has an undercurrent of unease and discomfort in what we are doing. Every challenge that comes our way adds to this grim attitude and at this point we tend to be 'stressed'. James O'Dea introduces a new perspective to the phraseology of the word 'stress', that ultimately removes all the negative connotations to it. He proposes that as we experience stress we can view this internal energy as notification that an "action is needed, a response is required – a choice needs to be made."[24, p. x] For stress is not a negative force that one is to try to avoid as much as possible in order to escape pain in our lives, on the contrary, it is a motivating energy that is necessary for the evolvement of our human existence and can be used as a tool to realize what part of our character we need to develop at this point in time. "We have created a false polarity between stress and relaxation – as if one is good for us and the other is bad"[24, p. 7].

Unconsciously we tend to gather an opinion as we go through life that stress is something purely destructive to our development as human beings and thus something is wrong if we feel stress. Is it possible then, for us to change this sentiment and begin to identify the challenges in our lives as hidden gifts for our development? If we begin to view stress as notifications to us that we are in 'the box' and need to initiate action to in order to change our 'way of being', and thus tackle the situation with new eyes. Stress manifests itself in various ways according to the intensity of the situation, everything from the paralysis that occurs because of a worrying mind, increase of pulse, to the trembling of hands and knees and sweaty palms. If these

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[10] This subchapter is inspired by the book "Creative Stress" by James O'Dea.

symptoms are not given conscious attention and remain unattended, then signals that can seem neutral and unimportant can develop and escalate into time bombs that are waiting to go off as soon as one is presented with a situation that pushes one over the edge. However, if this stress is acknowledged and contextualized, then one has the capacity to turn any situation into one of limitless possibilities.

If we re-frame the way we view stress and choose to fully engage in the experience of it, we can begin to utilize its energy to face our fears and ultimately enjoy the thrill of traversing new ground outside our comfort zone. This is similar to when a skier is trying to improve his skills and push his limits as an athlete. Although he is aware of the potential threats and dangers that surround his endeavors, he still tries to tame his fear with courage and perseverance. As his skills begin to increase and his confidence reaches higher and higher levels, he can begin to embrace the obstacles in his path with joy and amusement and can unlock doors to creative possibilities that would have never been possible if he would not put himself into stressful situations. If one never finds the courage to push one's limits with continued effort and conscious knowledge, then there is no way to evolve as an athlete. However, within the realm of sporting activities, the willingness to face one's fear and consciously override the anxiety that appears during the process, is and intuitive aspect of the undertaking. While we seem to struggle to carry over this same eagerness in our approach to work or inter human relationships with other human beings. We get caught up in the mental pressures that surround the situation are unable to route the stress signals to their corresponding parts of our being that can contribute to taking creative action. These pressures build up and contribute to the bulk of negative stress that linger within us in an undercurrent of resentment for anything that seems to be counter to what *we* want to occur in our lives.

To be able to route these stress signals in ways that lift us up towards higher creative capacities is the idea behind 'creative stress'. If we begin to engage and face our stresses head on, we can begin to realize the remarkable potential we have as individuals. However, if we are not consciously cultivating a relationship to the stress in our life, and allow our stress to bear us down to the point where we are completely overwhelmed by the negativity that surrounds it, we can loose are way and stagnate in our growth[11].

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[11] I have yet to have a lecture for mechanical engineers about how to cope with stress. Though this is something that every student has felt. Everybody is under pressure to meet their deadlines and yet information about stress is not often discussed during class. I feel that even the professors are stressed at times, but instead of stopping up and learning a little about stress and how it develops, we race on to the next topic and slide down a new board to continue on to the next part of the curriculum. We say we don't have time to stop and have discussions, because we have so much to get done. To me however, what it all seems to boil down to is that, all we want to get done is to satisfy the yearning for the feeling of stress to go away. And maybe if we took some time to understand a little more what stress is, than we would better understand how to deal with it.

Generally speaking, there are four ways of responding to the stress signal in our life [24, p. 3-8]. Firstly, the 'non-response' is the tendency to ignore the notifications that the body sends and not using them to take action. Examples of this could be: disregarding obvious feelings of disapproval between two individuals in a relationship (for instance at work or in one's living situation) because one does not want to generate more difficulty by doing so, and therefore decides to do nothing at all. In more extreme cases, where one finds somebody lying dying/dead on the street, but then continues to walk on by as if nothing ever happened. The consequences of ignoring one's stresses are obvious and the body will generate louder and louder signals in order for the notification to be registered. This causes unnecessary fatigue to the body, which could have been avoided if cared for immediately.

The 'inauthentic response' is when one doesn't give appropriate attention to the signal and therefore sends a decoy in order to distract it. This could be for instance when one is acting nice to a superior in order to get out from under an uncomfortable situation or blaming others to be the cause of a problem rather than accepting the reality of a situation. This type of reaction spoils integrity and we tend only to distract ourselves rather than to initiate true change in order to actually remove the hindrance from our path.

Thirdly, the 'make matters worse response' is to attack whatever or whoever is we assume is the source of the problem. Which is often accompanied with rage or visible expressions of anger. This is a trait that is easily recognizable for it is often loud and out of control. These outbursts are rarely necessary (if they are at all) and tend to only stir up more trouble and make things worse as we have discussed earlier with the collision diagram. They seldom bring forth any fruitful wisdom or open any doors where a constructive solution can be born.

Understanding how to control ones emotions or deal with stress, is left completely to the student to figure it all out, instead of working together with the professor to share their experiences together and gain new insights about how to deal with life challenges. If we were able to have this type of communication with each other, surely there would be a more loving and welcoming atmosphere at school. "Among university students, data indicate that the average person reports being happy 65 percent of the time, neutral 15 percent of the time and unhappy 20 per cent of the time.[21]   D. R. Larsen, Buss & A. Wismeijer, *Personality Psychology*: McGraw-Hill Higher Education, 2013."

Wouldn't be great if we could make that happy value go up? Now we see the emergence of a new field of positive psychology that's new movement will surely have and impact on how we view how we are to run our daily lives. It focuses on trying to figure out what makes people happy, rather than focusing on what is wrong. It has taken research a long time before ideas like these have caught hold, and we are at the very forefront of a very interesting future. However, a lot of these new insights developed by positive psychology haven't caught hold yet, and we need to engage in learning more about it so that we can better equip ourselves to face our challenges.

Lastly, O'Dea talks about the 'creative stress' approach which utilizes the signal to perform fruitful action. Examples of this can be expressed by the creativity shown from heroes or leaders that are able to engage in challenging situations while keeping calm but steady once they need to make a decision. Although there are immense challenges staring them in the face, they can still remain composed enough to think clearly while under extreme pressure. Other examples are masters of craftsmanship, who also have to directly engage with stress in order to be able to become proficient in their technique. We see that there is many ways to react to stress and all of us have experienced these different approaches to some degree through out our lives. However, what if we begin to view stress solely as possibilities to initiate change in order to perform more fruitful action, and thus engage in 'creative stress'. Surely then we would become more productive individuals and spare ourselves from the negative emotional and physical side effects of the accumulation of negative stress.

Often we find ourselves fleeing from our stresses in life, for example by excessively watching TV-series or escaping to the bar at the beach. However, if we are truly honest with ourselves we realize that these types of escapes are only superficial and the only real peace we can find is actually tending to our problems and solving them directly, i.e. we register the stress notification and give it an authentic response and do not self-betray. Only then we can truly relax without feeling frustrated, bored, or torn in different directions because of our worrying mind. We begin to realize engaging with stress is the only true antidote to dealing with it and begin to allow the discomfort to stay with us long enough so that we can learn from it. With the direct encounter to stress we can begin to ask ourselves deeper questions: "How did this happen? What does this mean? What is the situations asking of me? How can I behave differently? What insights can I gain? What can I learn from this? What am I called to be?"[24, p. 10]

As we begin to wrestle with ourselves, we uncover new truths and can view our challenges from more comprehensive viewpoints. If we allow the stress to resonate within us before taking immediate action (like fighting back or ignoring), we may feel uncomfortable and confused, but this allows for something new to materialize from the examination rather than a template decision that we have chosen many times before. This new path that emerges after contemplating the stress signals may not be easy, in fact far from it, but it *is* a way forward and once we have seen the vision of it, we can summon courage from a much deeper level within ourselves than we ever thought possible. If we were to look back upon some of the most challenging situations in our lives, we can see that they were the cause for what stimulated immense growth in our integrity and character.

With this deeper understanding of the difficulties that come knocking at our door, we can begin to realize that these very exertions are what we need to reach the next stage of our development. Only then can we begin to accept them in as welcomed guests and with open arms. If we have this approach to our challenges in our life, we begin to cultivate our faith that everything is going to turn O.K. and we can find the

courage to act in the face of partial information. This is the start of truly anchored life where one is not dependent on external circumstances in order to be joyful, but has the capacity to be joyful within, although there are challenges without. Furthermore, this deepened insight recognizes the necessity for humility as we confront our challenges. Similar to when a martial art's professional greets his opponent with a bow and is aware that he is going to learn a lot from this new fighter, but also realizes that it is going to be a painful adventure.

Its as if we partake in a "willing apprenticeship with life's more difficult lessons" [24, p. 15] and use them to help us grow. This is recognized as we stare into the faces of our grandparents and notice that every scar has its story and their presence emanates a calm and wisdom that is soothing in a time of need. For through their long lives they have lived through many ups and downs and realize that joy comes to us in many shapes and sizes. One day bitter, one day sweet, good and bad. Happiness comes and goes and ultimately it is how we decide to accept these experiences in our lives that determine whether we are truly joyful, creative and productive. We begin to realize that there is ultimately no distinction between our inner and outward lives but we begin to view them as one. We then can let loose of the attachment we have to having things play out the way we want them to, and begin to use the challenges in our lives as hints for where we should be focusing on at any given point of time. Our fears can then begin to dissolve as we put all our attention on our stress signals that we use as guidelines for what is truly important at this moment. If and when life sends us a real curve ball, we can pounce on it and make sure it won't develop into something worse later. 'Positives' and 'negatives' begin to become more relative and with this elevated insight we can view the world straightforwardly rather than creating a artificial world full of false positives.

After practicing tending to our stresses for a while and suddenly we decide to avoid a situation by pushing it under the carpet, our inner conscience will realize that we haven't given the appropriate attention necessary to the problem and make sure that our conscience feels it. It is as if we have an internal "honest accounting department"[24, p. 28] that recognizes within us if we have tended to a problem sufficiently. If we don't pass the test, our body will send another dose of anxiety that hangs around long enough so that we stop biting our nails and grinding our teeth and take suitable measures. This is analogous to our guilty conscience that we try to override by using self-justification in order to remain secure that our in 'the box' choices were accurate when in fact they are not.

In order to begin to use stress as a creative force we need to start to recognize what our patterns are. Which of the four methods do we use and how can we begin to give our stress a truthful answer to use it to transform us into creative problem solvers. By having courage to hold the confusion that we feel within ourselves as we begin to view our tests from different angles we can begin to use our concentrated energy as a catalyst to bring change and stimulate growth. This does not mean that the decisions that we make are going to be the right one, as if we have some kind of crystal ball that

solves all of our problems as we start to engage with stress. This is obviously not the case and we will continue to make mistakes but we can look back upon these mistakes with dignity and realize that we did the best we could with the information at our disposal at that particular time. This way we don't waste enormous amounts of energy and time regretting earlier errors and are rather more focused on the learning's therefrom. We then can begin to realize that each challenge is apart of the step of 'the process' and is necessary in order for us to encompass the complexity of the challenges that await us in the future. With this, there begins to seep in a calmness in our lives that when an important response is required (rather than being thrown off-balance or throwing back any other premature reaction) we have developed the capacity to bring something deeper to the situation and can deliver an honest response from the depth of our hearts.

TO SUM UP

We can begin to invite our challenges and stresses with open arms for we realize that every challenge that comes our way is information that we can use as a clues for what parts of character that need to be developed at that point in time. As we begin to become aware of our stress patterns, we can learn to be patiently confused and hold our difficulties with conscious attention until we feel that we can make a holistic response that reflects wisdom, compassion and creativity and then execute that decision with dignity.

A.4 THE HUMAN VALUES COURSE IN BHUTAN

While I was in the East, I traveled to The Royal University of Bhutan in Gaeddu to attend a ten-day course in Human Values and Professional Ethics. In the following I will present roughly the curriculum from the viewpoint of the course with little or no analysis on my part. I will just to the best of my ability try to summarize the parts of the curriculum that I found interesting.

EXTRACTS FROM THE COURSE

As we see the experience the world developing and progressing we are met with several contradictions. We have immense technical and scientific development, wealth and prosperity on the one hand but on the other we have extreme poverty, corruption, mistrust and environmental degradation on the other. These contradictions are becoming more observable as time goes by and it seems as if all of mankind is in search for a solution to the wounds of current society. The book "A Foundation Course in Human Values and Professionals Ethics" is attempt to create a course to improve the individual's capacity to find solutions for these contradictions, understand the nature of today's challenges and how to increase the quality of relationships between human beings and with nature.

The direction in which our current education system is taking us is to be more focused mainly on skills rather then understanding *why* we pursue these skills. From the perspective of the book, it seems we are more focused on 'how to do' things rather than 'what to do?' or 'why to do?' It is as if 'why to do' is decided a priori, however this a priori assumption is never intellectualized unless we stop up to discuss values and value education.

The three professors developed the course are:

- Prof. R. R. Gaur is a Professor in Mechanical Engineering and is the Head of the National Resource Centre for Value Education in Engineering at IIT Delhi.
- Prof. R. Sangal who specializes in Artificial Intelligence and Natural Language possessing and is the Director of IIT Hyderabad.
- Prof. G. P. Bagaria had a background within Electronics and Communications and is an alumnus of IIT Kanpur.

Although each of these Professors have technical backgrounds and recognize the importance of technology, they stress that technical education does not determine what is valuable for human beings. Science and technology gives us the means for

how to pursue what human beings find valuable, but technology in itself does not decide what is valuable or what is not. The subject that decides what is/is not valuable for human beings is value education. This book was created with the purpose of portraying this knowledge and elaborating on this subject. "Values thus provide the basis for all our action and there is an essential complementarity between values and skills which needs to be ensured in any education system."[22, p.xv]

The symptoms of educational institutions devoid of any value education are prevalent in Universities around the globe. Symptoms like "self-centeredness, acute competitiveness and insensitivity towards others - to indiscipline and violence in various forms, addiction to drugs etc. and in the extreme cases, depression and apathy towards life itself leading to suicides"[25, p. 2] Students loose their creativity and thirst for knowledge that they once had in their previous years of schooling and are only kept afloat by the intense peer pressure. This lack of inspiration promotes students to take on bad habits like sleeping late, excessive multimedia endeavors, online chatting and gaming and being packed in hostels where others are doing the same thing, further fuels the fire. This creates a culture that can, in effect, not produce "job ready" graduates that lack the maturity required of them in a full time occupation.

Human beings' conduct is greatly influenced by their education and it would be logical to assume that unless something in the present changes, our future will continue the way it is in the present. Therefore to introduce human values education as an important part of every student's higher education, will very likely have an influence on the future of the individuals involved and inevitably the society at large. The problem is that in our current structure we rarely have the opportunity to ask questions like: How do I decide what's important for me? How will I use my education? Why am I getting an education? What is success? What do I want? Who am I? This course seems to be one of India's first attempts at creating a curriculum that can be implemented nationwide for the purpose of giving appropriate attention to questions like these and simultaneously increasing the well being of its individuals.

The general method that the course takes in order to accomplish this goal is the implementation of self-exploration. The course guides the students through a step-by-step understanding of how human beings view reality and puts it in to holistic perspective in order to allow students to begin to view themselves as a part of a unified family and part of one unified organism. This is contrary to the traditional materialistic/mechanistic assumption where humans are "fighting for survival" and are independent forms of consciousness that are completely separate from the surroundings outside the membrane of their skin. The course is supposed to supply the students with a method of "self-acceptance" which if applied with the correct "understanding" will be serve as an inner compass that can guide each individual to solve all of their challenges in a holistic and reflective manner. This "understanding" then will relieve us from inner contradictions, dilemmas and confusion that we usually encounter on a daily basis and thus live more in tune with the existence as a whole. The course also does not want to come across as a source of directive prescriptions or

'do's and don'ts' but rather encourage students to investigate these universal questions for themselves and see what answers arise.

One of the fundaments principles that the book bases its theories on is the concept that all human beings ultimately want happiness, prosperity and its continuity. In order to address this fundamental thesis in a structured manner, the book breaks down human living into four levels: Myself, Family, Society, Nature/Existence. And on the basis of these four levels, investigate each level and explore why harmony at all these levels are important and necessary for our happiness. The message ultimately is that this harmony is indeed possible and that "we do not have to 'create' this harmony but that – it is already there. We only have to understand it to be in it."[22, p. xxxii] In other words if one has the correct "understanding" then one has the capacity to live in harmony on all these levels.

UNDERSTANDING VALUE EDUCATION

It is important to realize what we consider valuable in our lives, for otherwise our actions may prove to be in contradiction to what we actually want to gain from performing that action. "Basically all of us are aspiring to be happy and whatever appears conducive to our happiness becomes valuable to us. Values form the basis for all our thoughts, behavior and actions."[22, p. 4] If one has not taken the time to reflect on what one finds valuable in life, one is relying on one's ad-hoc beliefs and values for the justification for the execution of their actions. If one does not take special care in focusing on what values are important, then what we read, see, hear about, talk about, see on TV etc. all contribute to what we find valuable and we can be programmed to believe in values that do not resonate with our 'natural acceptance'. In contrary our values and beliefs are just an accumulation of thoughts that are a part of our cultural conditioning. In addition these uncritical views and ideas usually change overtime and in sync with the trends and fads that are going on in our society around us. What one-person 'values' may not be 'valuable' for someone else and so on, and this may lead to unhappiness between groups or individuals. With the implementation of 'right understanding' and 'natural acceptance' one can do away with contradictory and conflicting value statements and begin to validate them instead of assuming them to be true based on our previous cultural preconditioning.

With this fundamental value base structure of 'right understanding', and with the validating system or our 'natural acceptance', we will then have the capacity to determine what is valuable in business, engineering, management etc. This holistic view will not be fragmented, but rather more focused on what is conducive for human happiness as a whole. The guidelines that are used for what should be considered as correct input in this book are: *Universal, Rational, Natural and Verifiable, All Encompassing and Leading to Harmony*. These guidelines ensure that what is presented is universal for all human beings, true at all times and all places. It is devoid of any dogmas or blind beliefs and can be rationally explored and elaborated. They are verifiable by the use

of our inner 'natural acceptance' as something that is valid for all and ultimately will lead to harmony within us and with others. Throughout the course the authors want the students to not just to accept the viewpoint of the course, but put it to the test and validate it with their own 'natural acceptance' and see if it is in coherence with their perspective on life. Through this continual possess of receiving information externally and authentically validating it internally, one can gradually throughout the course start the process to familiarize themselves with the concept of self-exploration.

SELF-EXPLORATION AS THE PROCESS FOR VALUE EDUCATION

Traditionally we are more focused on what happens outside our bodies rather then what happens inside our bodies. However to start to implement the process of self-exploration, one must start to observe what is going on within as well as without. This then puts focus on our emotions and feelings in relation to what is going on around us and we can begin to notice what situations start to trigger different emotions. We can begin the emotions within us as they arise and settle just like we observe externally the waves of the sea splashing onto the shore. This is the beginning of using the "inner eye" to view within oneself instead of the material eye that focuses without.

NATURAL ACCEPTANCE

The process of self-exploration requires that one starts tuning in to our natural acceptance. If one deeply ask oneself a question when can find that there is an inner compass that is ready to give a clear answer to what has been proposed. When we are detached from our preconditioning, previous assumptions or other people's views, we can observe within us an answer by utilizing our natural acceptance. When we ask questions like: Do I want to be happy? One realizes innately that the answer is yes. This answer comes from our natural acceptance that we find within ourselves.

OBSERVATIONS ABOUT NATURAL ACCEPTANCE[22, P. 21]:

1. Natural acceptance does not change with time: For instance a hundred years ago it was naturally acceptable that for people to be happy and trustworthy and that is the same today.

2. It does not depend on place: No matter where one is in the world this in East or the West if we deeply ask our natural acceptance, the answer would always be the same.

3. It does not depend on our beliefs or past conditionings: If we are detached from our previous assumptions our natural acceptance will always give us the same answer.

4. This natural acceptance is 'constantly there', something we can refer to: If we think of instances in our past where injustices were performed towards us or that we inflicted upon others we notice that our natural acceptance instantly gives a sense of displeasure for what has happened.

5. Natural acceptance is the same for all of us; it is a part and parcel or every human being, it is part of humanness. It is within us and we only need to get into contact with it. Each proposal we hear from within and without we need to start to verify it, by observing if it resonates with our natural acceptance or not.

The problem today is that we are not validating our assumptions that we are making about life and reality with our natural acceptance, and thus continue to live with faulty assumptions without further investigation. We keep these assumptions tightly locked up within ourselves and become defensive and self justify them without actually spending time validating these positions. When someone challenges our views we become defensive and end up cheating ourselves as well as others. The way out of this behavior is to authentically begin to validate our assumptions based on our natural acceptance and to live in accordance with them.

Basic Human Aspirations- Continuous Happiness and Prosperity

If we were to ask ourselves: "What do I want?" we would maybe construct a list of different things that I find important in my life. Usually at the root of all these endeavors, is the desire to be continuously happy. When we live in this state of happiness and our life flows freely and we enjoy life. However, our happiness is often short-lived and not sustainable and we don't deeply and critically investigate what it is that actually gives us happiness? Sensory pleasures like enjoying a tasty meal or smelling something enjoyable is short lived and hardly have lasting effects on us. However, this misunderstanding between what is the source of short-lived happiness and continuous happiness is ultimately one of the biggest challenges we encounter in life.

This question of happiness requires deep contemplation and one way to begin to deepen on the subject is to distinguish between prosperity and wealth. According the definition of the book, one is prosperous when one has the capacity to judge between what physical facilities are required to maintain a sense of happiness. A prosperous person may have little physical facilities, but since he feels good, he is willing to share. While a person that is wealthy, may have a lot of physical facilities but feels deprived and will not share his wealth. This feeling of being deprived can be detrimental, because when one has no limits for their wealth one tries to fill this sense of lack with material things. This of course is not possible because if the individual has not come to

the understanding that distinguishes between wealth and prosperity one will endlessly seek material wealth in order to get the sense of feeling prosperity. If one does not contemplate on this concept it will be like trying to fill a bucket that has no bottom.

The Program to Fulfill Basic Human Aspirations

In order to live a harmonic life we need to have mutually fulfilling relationships. If something is wrong in our relationships we feel uncomfortable and uneasy and want to solve the situation. For instance we get in a fight with a friend and we leave their presence, there is still a lingering feeling of unease within us. The problem lingers on and is with us as we move about the rest of our day and resides almost until the situation is resolved. Had we been in unity, this negative emotional state would have never happened and this emotional baggage would have not been with us. Thus having the capacity to maintain healthy relationships is important for our well-being and happiness. The reason why we are not able to maintain mutually fulfilling relationships is largely due to that we proceed to go through life with false assumptions with which we structure our reality and are not giving appropriate attention to validating these assumptions.

A common false assumption we have is that as long as we continuously accumulate wealth, everything else in life will fall into place on its own. For example if we ask ourselves is the unhappiness within our families due to lack of physical facilities or is it due to poor relationships? In most cases it is due to the poor relationships that cause all the contention and difficulties. If we would have good relationships, the material wealth would fade into the background and the love one has for each other is in the foreground. Furthermore were we to ask ourselves how much time we spend trying to mend relationships compared to how much time we spend preparing for the attainment of physical facilities? It becomes obvious that our priorities tend to lean in the direction of improving our wealth rather then the quality of my relationships. And if one does not dedicate time and energy for the development of something, it remains static or deteriorates. Unconsciously, we think that our material wealth will somehow repair our failing relationships without having to apply energy to them. However, when we think critically about the matter this subtle error becomes apparent.

As we increase the quality of our assumptions through the process of validating them with our 'natural acceptance', we gain the capacity to tend to our relationships at the individual, family and society level. With a more accurate understanding of our relationship with the world around us we are better prepared to face the challenges that we encounter. The "problems" we have in life are usually there because we have made the wrong assumptions and thus fail to see the harmony that lies behind the so-called "problem". If we do not root out these fallacies within our assumptions, we tend to live on the basis of 'animal consciousness' and do not rise up to 'human consciousness'. Animals are mainly occupied by getting some physical input from their environment to feel a sense of fulfillment. While to a large degree that is what we

are doing as well, only with more sophisticating methods. We package our food, have luxurious gadgets, and surround ourselves with more pleasurable surroundings etc. But at the center of it all, we are only trying to satisfy our physical facilities and have yet to elevate our human consciousness to the point of realizing the metaphor that lies behind all these physical facilities or sensory pleasures.

UNDERSTANDING THE HUMAN BEING AS CO-EXISTENCE OF SELF ('I') AND BODY

The human being is more then just the body. We think, feel, believe and so on which gives ourselves a sense of 'aliveness'. We say, "I am happy", "I am sad", "I feel tired" etc. and this "I" or "self" we are talking about is called "consciousness" which is a defining attribute of the human being. It is our self-awareness, or the awareness that I exist and have a body and consciousness. It is this consciousness that decides to walk, talk and perform other activities it is not the body. The body is the instrument that performs the action but it is the 'I' that actually makes the decision. When we watch movies, eat food, feel happy or sad, or meet with enjoyable people it is not the body that gets excited, it is our consciousness that has the sense of enjoyment or pain where the body is just a medium in that pursuit.

To help us understand this distinction between body and the 'I' it is important to recognize what needs apply to the two and the differences between them. By asking questions to ourselves we begin to notice the differentiation. "Who takes care of the body?" We realize quickly that the answer is "I take care of the body." Is it the body or the 'I' that needs: Trust? Respect? Happiness? All these apply to the 'I' and not to the body. However, the body needs physical things like, food, exercise, healthcare, clothing etc. So we can distinguish the difference between the needs of the self and the needs of the body as physical things and non-physical things. Physical things consist of clothing, food, shelter and so on. While trust, respect, happiness and so on are what constitute the non-physical category.

Thus we have two different categories that we need to work in to maintain our happiness; the non-physical things for the 'I' and the physical things for the body. Furthermore, if we were to classify the non-physical and physical needs according to clock-time, we realize that there is yet another recognizable division, namely non-physical needs are continuous and physical needs are temporary. For instance, we need food only temporarily and not continuously in time. We eat until we feel full and then we do not need food for a period before we feel hungry and have to eat again. The very thought of eating continuously is horrifying. Similarly with the concept of shelter, we only need shelter temporarily. If we were to live indoors constantly in one room it would be like living in prison. Thus we need shelter within different time intervals according to the circumstances but never constantly. Another example is that we need lighter clothing during the summer and warmer clothing during the winter and thus this need for clothing is not continuous either. On the contrary, the needs of

the 'I' are continuous according to clock-time. We constantly want to have respect, truthfulness, justice, love, happiness, acceptance etc. and there are no circumstances or situations where they are not wanted.

Another distinction we can make between the needs of the body and the 'I' is the quantity and quality of these needs. The needs of the body are quantitative in number. We can't have and infinite number of cars, bicycles, shoes, mobile phones, food or anything else material. Ultimately, if we were to break down what material needs we truly need, it will always be a definite amount of things and not infinite. Somehow we get confused and think that we need infinite amounts of material things for our happiness. We get further confused when we exchange our unit of measurement of these physical needs to money. It seems as if the amount of *money* we want is undetermined in contrary to the actual physical entities we can determine definitely. If we were to make a list of all the physical things we need, we would make a list that is limited and definite (no one has an infinite list of things they need). But something happens when we think in terms of 'abstract' money, where we want an unlimited amount of money, and thus forget the idea that we only need a definite amount of material things that need to be satisfied. Thus the idea of infinite amount of money is a false assumption that needs deep reflection to be understood, so that we do not continuously pursue an infinite amount of money to satisfy a limited amount of material needs.

On the other hand, the needs of the 'I' are qualitative and essentially we want them to be fulfilled. These needs are either satisfied or not, you feel accepted or you don't, you feel loved or you don't and so on. For example one can be sitting comfortably in an expensive restaurant eating wonderful food, but the atmosphere within the partners in the room is horrible. Although the necessities of the body are satisfied, you can still feel uncomfortable because some of the basic needs of the 'I' are not fulfilled. These needs could be: acceptance, love, compassion, trust, respect etc. Thus there is a difference between the bodily needs and the needs of the 'I'.

We have not applied enough conscious thought into separating the needs of the self and the body and therefore are unconsciously seeking happiness in material things, where it cannot be found. We try to accumulate unlimited wealth to ensure continuous happiness, which is ultimately a self-defeating process that leads to unhappiness within oneself and affects the relationships around us. We also seek to satisfy the 'I' by receiving appreciation from others by "showing off" our material things. This of course may inspire others to appreciate our accomplishments and so on, but it may also invoke jealously and other feelings amongst the people in one's social network. This "showing off" will not satisfy the 'I', which has a different set of needs altogether (based on trust, respect, love etc.) that have little to do with appreciation for the accumulation of material wealth. The need of the 'I' are rather universal qualities that everyone desires regardless of one's social status or rank. With this understanding one does not seek happiness from external physical entities or

external recognition from others, but finds this from within one's self on the basis of giving and receiving non-physical things like love and compassion.

UNDERSTANDING VALUES IN HUMAN RELATIONSHIPS

When we realize that there is a distinction between the 'I' and the body, we can see that the people that we communicate with also have an 'I'. Therefore when we communicate, it is between the 'I' (subject) and the other 'I' (object). The significance of this realization is that we start to act towards that person with the awareness of the others 'I' needs. If we recognize their needs and try to act accordingly we will have a better chance of having mutual fulfilling relationships because we have a better understanding of what the people around us are seeking from our interaction. This leads us to the definition of justice: "Justice is the recognition of values (the definite feelings) in relationship, their fulfillment, (and) the right evaluation of the fulfillment resulting in mutual happiness."[22, p. 130]

According to this definition, only when one is able to recognize the definite feelings or values that are present in a relationship, have the capability to fulfill these values and feel mutual happiness, is justice is ensured. If we view the world with this definition we realize that justice is not satisfied. We could say that the deterioration of relationships within families and communities is due to lack of justice in the relationships. Once we start to view our relationships on the basis of the needs of the 'I' and live in accordance to our natural acceptance, we can maintain justice and live with healthy relationships.

A common mistake we have done is that we have reduced the purpose of relationships to the transaction of material and physical needs. We feel that the relationship is mutually fulfilling if we maintain a steady flow or physical entities from one to the other and essentially providing each other with wealth and assume that that will automatically take care of all the other needs. An example of this is when a father provides for the child materially, and thus thinks he is fulfilling his duty of maintaining a good relationship with his child. However, if the father does not spend his time with the child, care for the child and love the child, there will be something missing in the relationship on the level of 'I'. Furthermore, if these needs on the level of 'I' are not tended to, eventually the quality of the relationship will deteriorate and ultimately be ruined. One could say that in this situation between father and child there was a lack of trust, where the book defines trust as: "To be assured that each human being inherently wants oneself and the other to happy and prosperous."[22, p. 133]

When we ask ourselves when do I feel afraid? It can be reduced to the point where we do not feel assured that the object in our relationship wants us to be happy and prosperous. When the object in our relationship does not concern itself with my happiness and prosperity we loose trust. While trust is one of the fundamental and essential necessities of any relationship in our lives, its denial would prove extremely

destructive. In the light of this, the book asks four question to further investigate the concept of trust in relationships[22, p. 134]:

1. Do I want to make myself happy?
2. Do I want to make the other happy?
3. Does the other want to make himself happy?
4. Does the other want to make me happy?

As we proceed to answer these questions, we find that some are easier to answer then others. We find that number one, is an easy yes. While number two may be a little difficult at first where we may find ourselves arguing that maybe I only want to make the one's that make me happy and so on, but through thorough exploration and deep contemplation we realize that ultimately we don't want to intentionally make anyone unhappy. If we apply this question to our natural acceptance, we usually arrive at a similar statement to: I want to make other people happy, but I am often not able to do so. As we ask ourselves question four, we may find it difficult to accept as an affirmative. The exploration of this question is what lays the foundation for trust in our relationships and if we do not affirm this statement we continue to live with a sense of doubt in our relationships[12].

As we explore this question we realize there are two parts to the examination namely, our intention and our competence[22, p. 134]. The intention is what one wants to do according to our natural acceptance, while the competence is the actual ability to fulfill this intention. Where this becomes relevant is that when we answer question one and two, we generally base our argumentation on our subjective intentions. However, when we examine how others relate to us in question three and four, we base our argumentation on their competence. In doing so we are basing our arguments on two different principles, one from intention and one from competence. We are neglecting the 'I' in the others around us and are judging them unfairly by looking at their competence rather than their intentions. It is as if we believe our own intentions are valid and true while we cannot trust the intentions of the other. When we are able to put ourselves into their shoes and realize that they also have the same intentions as we do, and it is just their competence that is lacking, we are able to help our friends to show compassion to one another.

An example from the book regarding this theme is; say you are walking on the street and suddenly you see someone you know and you try to make contact with him as you pass by. Your intention was to spread joy but you are confronted by his action of him ignoring you. Thus you go about your day thinking that his intention was to ignore you and by doing so he hurt your feelings. Later, you hear that he was upset because he had just lost his wallet. He was disturbed by this and didn't have the

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[12] From the perspective of the book these questions are to be posed in a manner that does not suggest them to be true, but should be evaluated at the individual level based on ones natural acceptance. They are just to help the reader along in this exploration process of understanding trust in relationships.

competence at that point to return your greeting. As you doubted his intention it hurt your feelings and you felt a sense of opposition towards him, but when you realize why your friend was distracted, then you realize that the unease and hurt feelings that were residing within you were unnecessary. You didn't trust him at that point. "Having trust means we are assured at all times about the other person in relationship, no matter what the other's competence is. Trust comes from having this right understanding of the intention of every human being."[22, p. 137]

We only get the feeling of being hurt when we think other people's intentions are wrong. However, if we deeply understand that the other's intentions are the same as ours, and that it's just their incompetence that is the difference. Only then can we become a source that can help the situation by showing compassion to the other person. People are largely unaware of the distinction between intention and competence and thus go through life doing things they don't *mean* to do. No one intends to become aggressive, but sometimes we do nonetheless, and that is mainly because we don't have the competence to control ourselves. Through this process of trust and mutual respect for each other's longing for happiness, there arises within us the responsibility to acquire the understanding of how to recognize people's intentions behind their actions rather than over emphasizing their incompetence. In this way we can help increase each others capacity to understand and remind each other to focus on intentions and work towards having better competence.

Further, another result of this misunderstanding of people competence lead us to a society is centered on the concept of competition. We argue that competition leads to the pursuit of excellence and is necessary for communities to function at their fullest capacity. However, when one explores the concept of competition more deeply, we can see that competition can lead to the lack affection towards our opponents. When there is affection between individuals we are concerned with each other happiness and thus, indirectly their growth and development. However, when we compete with each other we are more occupied with the concept of dominating our fellow contestant rather then supporting their advancement. This creates a conflicting feeling within us in our working environments, where we are (to some degree) competing against our friends at school or colleagues at work. If we were truly showing affection towards one another we would not be competing against each other's but rather concerned about is our mutual fulfillment and through that pursue excellence.

When our friends are concerned about us fulfilling our potential and helping us on our path of pursuing excellence, we feel a sense of gratitude towards them. "Gratitude is the feeling of acceptance for those who have made effort for my excellence."[22, p. 155] While the general understanding of gratitude today is usually rooted in the feeling of thankfulness for receiving physical facilities. This type of gratitude is usually short lived in contrast to the deep gratitude that is felt for people that help us pursue excellence.

My View of The Human Values and Professional Ethics Course

My intention in producing this summary from the course was to shed some light on how other countries are talking about Human Values and Professional Ethics and how they are teaching this to students. I feel that the essence of the principles from this course can have an effect at the individual level, but as the course increases the scope to the society and the world at large, the projection of these same arguments of the individual onto a larger scale seems to lack the comprehensiveness necessary not to be debatable.

I believe that this course is a wonderful initiative and a great leap in the right direction for humanity to start to implement Human Values in Higher Education. The course allows the student to reflect on big philosophical questions that often go by unquestioned in the common day-to-day life. This course will allow students to take the time to reflect deeply on whom they are, what they consider valuable in life and are given some guidelines that will allow them to distinguish what brings happiness to a human life. The course introduces the concept of our 'natural acceptance', which can prove as a useful and necessary tool for one to make reflected choices in challenging situations throughout the rest of one's life. It briefly introduces definitions of fundamental concepts that need deep reflection like trust, respect, affection and justice and gives some examples of how these principles can be carried out into action.

Although the course is raising extremely valid questions and is promoting a great cause I do think that it has some things that could be improved. First and foremost is that the course starts off by suggesting that it is not trying impose any particular interpretation or connotation for the meaning of its statements onto the student. That the student is to freely accept or not accept what is being suggested as truths in accordance to their own preconditioning, so to speak. However, one of the fundamental building blocks of their argumentation throughout the entire course is the concept called 'right understanding' which, rather directly, states that there *is* a particular way of interpreting these postulations. This is clearly a contradiction and it seems to be me that the course is trying to lure the students into getting interested in the subject, without admitting that there is a domain for which topics can be interpreted. They start off by allowing the student to be completely free of any boundaries for which they can ground their reasoning, but than argue the opposite in an uncomfortable manner. I consider myself a rather open person, am very interested in human values subjects, and am amenable to new thinking and alternative thoughts. However, when I am met with clear statements that state one thing; there is no 'right' or 'wrong' (or words of that effect), and am presented with an argumentation that bases its entire framework on a concept called 'right understanding'; I get irritated. It was not that it stopped me from continuing, but it was just a general feeling of that the curriculum was a little sly with its content and portrayal. I was thinking to myself

"they actually mean there *is* a way of understanding something" but for some reason they wouldn't admit it.

I would have felt far more comfortable if the course had laid down some fundamental principles at the beginning of the book that are the building blocks for which their argumentations take form. For example if they presented the Declaration of Human Rights and humbly stated that this is an attempt to try to ensure these rights in the world, that may suffice for giving the student a general connotation of what is the limits of interpretation are. After this initial introduction of fundamental principles, the disagreeing individuals may not be encouraged continue with the course, which would be unfortunate. Nonetheless, at least the student will not feel deceived in any way and hopefully will have the opportunity to encounter these particular questions later in their life if he so chooses. But to say that there is no 'right' way to view human values and then act as if there *is*, causes disunity from the start. It's as if the authors hope that the reader won't notice this shrewd form of argumentation or think that somehow the students consciousness will suddenly shift to a state that accept this contradiction, and because of their thankfulness for this new insight, will forgive this method of presentation.

I want to make myself clear that I am not saying that there is a singular or particular way of interpreting human value concepts and therefore not accepting any diversity in interpretation. On the contrary, I fully support different viewpoints and in fact acknowledge that principles like truth, justice, consciousness etc. have infinite interpretations that all may be equally true. However, all these interpretations are only true within a certain framework and with the acceptance of a few fundamental laws that govern the unity of all existence. It is this fundamental principle of unity that I am trying to address, that there is some a priori recognition of order in the universe in which all these interpretations and scientific endeavors emerge from. These symbols, explanations, patterns etc. are only true if they are in coherence with the order of the totality of existence. I feel that the book doesn't address this particular problem and seem to try to avoid it, or hope that this understanding will come forth on its own. I do recognize that the process of accepting such an overall cosmos is a progressive process that takes time to develop within each individual, but I still think that by subtly acting as if this order doesn't exist on the one hand, but arguing it for it on the other, is not the best method of approach.

This brings me to my next point, which is that this course is not suited for everyone. Although these fundamental principles are valid for every human being, and that each individual has the responsibility to think of them at some point in their life. It would be an overstatement to think that this particular course is the solution for that endeavor. It will raise many valid and important questions for students to think about, that would most defiantly help their development as human beings. But to make this course obligatory for students would give the words 'human values' as many negative connotations and misconceptions as the word 'religion' within a very short period of time. And then would have to write a new book with a new tittle and new terminology

so called "stripped from any dogma oriented perspective" to try to beat around the bush of peoples false assumptions of 'human values'. To read this book or attend this course should not be mandatory, but rather it should come from the student's individual initiative.

In addition, the course is rather dry and boring. Although the topics touched upon in the book and the course could be epics in themselves, the book is completely devoid of any creative writing. There is no impulses or citations from historical writers throughout civilization, no hints to western philosophers, or no references to historical heroes like Gandhi, Mother Theresa etc. that could be used endlessly to support their arguments. Similarly, there are no case studies or elaborate examples from history or business that can be used to further illustrate the themes set forth in the book. In other words, it is a very black and white representation of what human values could be. In addition, there are also a few postulations that I do not find sustainable within the discourse of human values from a western perspective and feel that they lack some authority to make such statements.

The way in which the course was conducted was that we sat on the floor for about ten days straight listening to the lecture and it was a very rigid 'old school' method of portraying knowledge, which I did not find elevating, or inspiring. It was a true test of perseverance and dedication to maintain my one's concentration throughout such a strict course. There were several Westerners that were present all of which expressed a similar critique as me: that it was slow, lacked authority, made individuals feel pushed to have 'right understanding' but wouldn't admit it, boring, amongst other things. And lets face it. Sitting on the floor for eight hours a day is very uncomfortable.

All in all I think that, some of the presented are useful, but need to be seen in context to other sources and cannot be viewed as a valid source of its own. But a huge step in the right direction!

A.5 A Conceptual Framework For The Heart

I will attempt to present this model with intention of expanding our conceptual frameworks, so that we are better equipped to understand other peoples emotions as well as our own. Everything that follows is simply my reiteration of what can be found in its entirety in [17].

The model describes the characteristics of the heart in four dimensions. The goal is to have a heart that is fully developed and energized in all directions. The heart is 3D model of the poetic heart that we all are familiar with (valentine heart) the dimple in the back. When the heart is fully developed it is circular in all directions except for the dimple in the back, which represents the hearts receiving capacity. If we would be viewing a human from the top we could imagine that we could see the valentine shaped heart with the dimple at the back of the individual while the point is protruding forward from the chest. The dimple represents the feeling of someone giving us a 'push' as support or a loving 'pat on the back' as a helpful gesture. It is also is a symbol for the vulnerability of the human being for being betrayed or 'stabbed in the back'. The point at the front represents the giving or forward capacity of the heart.

FIGURE 25 THE ENERGETIC HEART (SEEN FROM THE TOP OF AN INDIVUAL) REMADE FROM [17, P. 47]

THE WHOLE HEART

The heart may be flat, narrow, broad, squeezed, shallow etc. and each of these shapes represents different kinds of personalities of an individual. The 'whole heart' seen from the front of the individual, is equally developed in all the directions as seen in the figure below. We can see that the individual has an equal development of capacities in all the directions and thus the heart looks round when seen from the front. The corresponding axis' shows generically what characteristics are dominant for the different directions. The hearts directions has its own challenges that one needs to be aware of in order to be able to weigh one's choices of behavior in accordance to the

other dimensions. They all need to be working together for one to make holistic decisions. In addition, if one is not able to show moderation in the development of a particular dimension, the heart can become distorted and thus have the opposite affect on the individual which will be shown in the following descriptions. These descriptions are my reiterations of [17, p. 49-78].
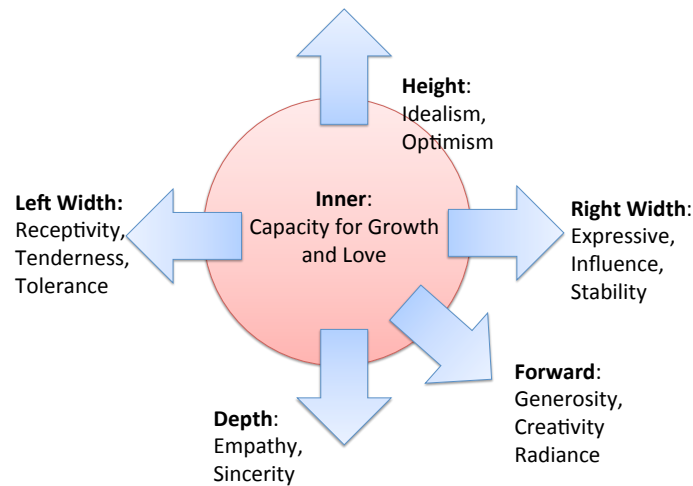

FIGURE 26 THE WHOLE HEART (VIEWED FROM THE FRONT OF THE INDIVIDUAL) REMADE FROM [17, P. 49]

The Broad Heart

Broad hearted people are often referred to as to be 'big-hearted'. We could think of a person that has their arms opened wide and welcoming as we meet them. A broad hearted person is a networker and can easily include others into his group of friends. The broad heart is extended evenly or unevenly to the left and right side. The left side of the heart represents the receptiveness of an individual, which characterizes if one is a good listener and is tolerant of others. This is visible by not complaining or judging others and thus showing acceptance. The right side of the heart is the expressive side, which makes an individual friendly and warm. One is known to go out of their way to serve others (even people that one doesn't know) and can easily connect with people. Having these qualities makes one firm and dependable in one's relationships and has a sense of contentment about one's life. Broad hearted people can often lift the attitude of a group to a better place since he is not affected by what other people do.

FIGURE 27 THE BROAD HEART (SEEN FROM THE FRONT) REMADE FROM [17, P. 39]

Some challenges of having a broad is that due to your welcoming character, you attract many people that need safety and stability in their lives. This will challenge your own stability because more and more people will seek to find you as their support. Everyone likes to have a broad hearted person by their side at their table or at a party, and thus the broad hearted is in a dilemma, torn in different directions, to try to satisfy everyone. In addition, if one is too naïve, one may be taken advantage of for one's helpfulness and can be exploited by others.

The distortions of the broad heart may be that because of one's acceptance, one may be permissive of wrong behavior. One may overlook a serious problem due to one's loyalty, which may reflect onto oneself at some later time. In overly distorted situations one may avoid confrontation in order to maintain harmony and thus not get to the root of a problem. You may let the majority of the group speak for you in order to be including and not bringing forth your individual opinion. However, of all the dimensions of the heart, the distortions attributed to the broad heart are the least disturbing.

THE NARROW HEART

When the heart is narrow it is constrained on both sides and is slim. When one has a narrow heart one feels isolated from others. One may feel intolerant and inharmonious with others and those feelings reinforce your isolation by not making contact with other people. When taken to the extreme, this can develop into social phobia where one feels very uncomfortable with others (especially strangers). When one has a narrow heart one can be unfriendly, easily irritated, uncooperative, intolerant to change and misunderstood. The only people that a narrow hearted person can relate to are people with very similar views and backgrounds as oneself (although even these individuals may seem annoying at times). One may specialize in a limited and inflexible range of abilities and may become anxious or angry when people are different from you. Another general trait is that you have very few friends that you may cling to desperately.

FIGURE 28 NARROW HEART (SEEN FROM THE FRONT) REMADE FROM [17, P. 51]

It may be challenging for you to work in a group or in an organization. If one's heart is deep, while still narrow one may be able to counsel others. However, you will eventually become burnt out since you are not able to cope with the continual exposure to different psychological conditions. Or if one heart is heightened yet narrow, one may be inspirational but quickly become cynical because of the response from the public due to the narrow-minded ideas.

Pleasure and pain are ways in which nature tries to expand one's heart. For example if a narrow hearted begins to relate to the love of one's family or close friends, the narrowness of the heart may slowly begin to expand as one tries to engage in this social process. However, others may grow through pain as one reaches out in search for sympathy. Either way both are part of the development process for an individual to become more broad and sensitive. If one is feeling pain in one's life, one can be reminded that the pain is there for a reason to allow something new to grow.

The Deep Heart

The deep heart is what allows you to connect easily to what other people are feeling. Similar to the way water lilies appear separate at the surface of the water, however they are all connected at the bottom of the lake. With a deep heart you are very considerate of others for you notice how your actions affect them. You are well aware of your own emotions and can distinguish between feelings of anxiety, desires, fears, longings etc. Due to your contact and friendship with your emotions; movies, music, arts, and other beautiful things like a smile from a child or a lovely day easily touch you. With a deep heart you have the ability to be honest with yourself about how you are feeling, and can express these feeling to others. These emotions are proof of the energy of your heart and its movement within you. Due to the depth of heart, you can help others with their frustrations and many seek out your company to share things with you. In order to access your deep heart you have to let go of two things: resentment (the feeling that others have harmed you) and guilt (the feeling of having hurt others). However this is challenging and that is why having a deep heart is rare.
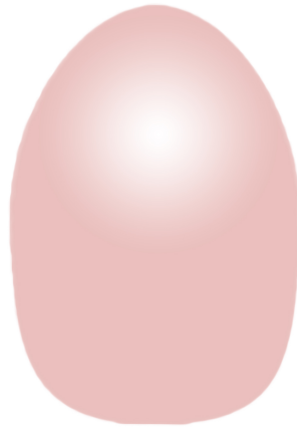
Some challenges of the deep heart are that you often have to hold great sorrow in order to hold great joy. You realize that in order for joy to exist, there has to be sorrow. The more joy one can hold and experience, the more sorrow one can hold and experience. With your deep heart it is easy for you to feel connected to others and thus also feel their sorrow and can become personally offended when you see someone act with injustice towards another. You can feel the suffering of others and take their problems as your own. You may even allow other to lash out or hurt you for you realize that they are only trying to express a pain within them for which they are unable to control. However, you already understand their pain and are able to handle the increased abuse. This is incomprehensible to a person that has not yet expanded the depth of their heart but becomes logical as this dimension is elaborated within oneself.

A distortion of the deep heart may be that due to its sensitivity, it may become shallow or narrow in order for the heart to defend itself. It may not be able to handle the pain of others and thus making the individual depressed. Another distortion may be that others may experience you as an emotional roller-coaster, for you can swing between anger and kindness or happiness and sadness due to your ability to feel deep emotions that express themselves differently at the surface. This may seem very puzzling for others that have not developed their deep heart and can seem manipulative or insincere. The rapid shift in emotional behavior may be upsetting for people for they may feel they are the ones responsible for triggering it. However, the deep hearted knows that it is a deeper emotion that is expressing itself on the surface and has little to do with the other person. With practice in developing the capacity of the deep heart one can be able to hold several emotions at once and thus can control the emotions by balancing them out with others. In addition due to your deep love towards others, you may feel that others do not love you in the same way and may lead to a lack of appreciation towards yourself. This of course is a symptom of self-pity and is counter productive for developing the dimensions of the heart.

The Shallow Heart

If one has had many challenges in one's life, perhaps during one's childhood or other reasons, one may try to cut off the emotions and thus loose the sensitivity necessary to have a deep heart. Without the ability to experience emotions directly or process them thoroughly with the help of one's deep heart, one may be deprived of the possibility of relieving oneself from a trauma from the past. All pain and emotional distress has a purpose and a meaning, and if you continuously try to hinder these negative feelings from being acknowledged, you can loose your inner compass and cannot distinguish between which feelings have importance and which do not.

FIGURE 30 THE SHALLOW HEART REMADE FROM [17, P. 57]

It is through the emotions of the heart that we truly connect with people; therefore we become hard to reach if we have shallow hearts. If one has a shallow heart one is cut off and has no access to the deeper power of one's heart. Without the experience of pain, life becomes mundane and our natural state is to be able to feel the whole range of emotions and not to be cut off from a selected few of them.

It is not possible to know yourself if you have a shallow heart. You can still function in the world, however this is mainly unconsciously. Since the heart and mind are working in different directions, a shallow person is often followed by difficult events like tragedy, illness and disappointment. This is mainly because one makes choices and plans without knowing what one really wants. Shallow hearted people are often thought to be superficial and do not trust their heart's feelings or the feelings of others. Shallow hearts rely on the mind and are scared of their emotions and therefore their actions are always reasonable, with little/no consideration to what their hearts tell them to do.

THE ELEVATED HEART

People with elevated hearts are optimistic and always look on the bright side of any situation. They recover quickly from disappointment and can easily lift themselves out of any depression with their elevated viewpoint. The elevated heart inspires excellence in oneself and in others, for one strives after high principles. Honesty is the fundamental virtue and truthfulness is worth maintaining at all costs. Due to your high ideals it is easy you to sacrifice yourself as long as it serves a cause you believe in. The elevated heart motivates others for one is surprising, humorous and quick which make you fun to work for, if of course, they appreciate your dynamism.
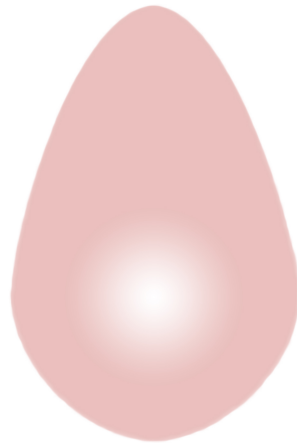
FIGURE 31 THE ELAVATED HEART REMADE FROM [17, P. 59]

Some challenges of the elevated heart is that because of your high ideals you are never satisfied since you are aware that things could always be done better, and often would rather work alone than working with someone that would lower the standards. You have the desire to be wealthy but you do one want to oppress or harm any others in the process. However, you may even avoid wealth altogether if it requires you to compromise your high ideals and principles. It is hard to manage you because you are self driven and aspired by your higher goals and your self-worth is naturally high, so traditional motivations of fame and glory do not affect you. Elevated hearts my have trouble finding a partner for there are not many that can live up to the standard of high ideals. Having these constraints of high ideals makes life more challenging compared to going through life apathetically, even though these constraints are self-inflicted.

The elevated heart can become distorted when it is elevated beyond balance. The result of this excessive behavior can experienced by the distorted heart becoming impatient or critical towards people that resist change, lack skill or have low standards. An elevated heart may become disappointed when one sees an individual, with a large capacity, unable to deliver at deadline. Furthermore, one may be so idealistic in ones own ideas that one becomes intolerant towards other ideas (fanaticism) and may even hold principles over people and thus have difficulty to maintain healthy relationships. If one's ideals are too high, one may begin to become cynical when they are not met and this may translate into satire (many comedians have elevated hearts). Your elevated perspective may become unrealistic and thus are not able to see that you are bound to fail. However, if this distortion is tamed and one is able to view the challenges that one faces as stepping-stones towards one's goal, breakdowns may lead to breakthroughs as one become more practical and realistic in one's decisions.

THE CRUSHED HEART

In cases where you experience severe oppression or disappointment you heart may become crushed. You loose your optimism, your sense of direction, morality and your enthusiasm. A crushed heart is slow to recover from challenges and you become short sighted since you are unable to create an optimistic perspective of the future. You become cynical, thus making your future and your present unbearable. The feelings of misery may justify you to take revenge by acting immorally (lying etc.) towards those whom you feel have crushed you. The crushed heart is hard to motivate and has lost trust in others. Honesty is degraded from being your most important virtue, to now being a tactical scheme that you apply or not apply according to the advantages it gives you in your pursuits. "You don't care enough about others to honor them with your honesty, and your apathy will even make you numb toward the pain of self-deception."[17, p. 62]
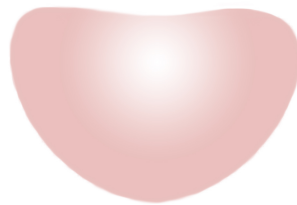

FIGURE 32 THE CRUSHED HEART REMADE FROM [17, P. 62]

THE DRIVING HEART

A driving hearted person is a natural leader who is powerful, courageous, generous and charismatic. In the presence of a driving heart you feel that you can do anything or at least far more that what you are used to doing. It takes all that is in your heart and projects it forward towards your desired goal. The driving heart takes the elevated heart and it applies it in a practical way, takes the compassion from deep heart and expresses it in creative action, and takes the contentment of a broad heart and shows self-confidence.

Some challenges with the driving heart is that it is great for short term goals, but often struggles to stay on track in the long term. A possible solution is to try to break the long-term goal into smaller pieces in order to not get lost. This heart needs friendships and alliances that help the driving heart sense the environment and are better able to network its way through obstacles in order to attain the given goal.

A typical distortion of the driving heart is the 'bull in the china shop' syndrome. If the driving heart is increased beyond balance one may loose consideration of one's actions and begin to be destructive in one's attempts rather than constructive. You feel a sense of rush in what you do and therefore you may become addicted to that tempo, where you may confuse intensity with importance and high tempo activity

with progress. You can become impatient with those that question whether your efforts are appropriate or if others cannot keep up with your pace. If you do not have something to focus your driving energy on, you may become paralyzed due to the confusion. This can evolve to become a self-destructive process if it is not tended to appropriately.

THE BLOCKED HEART

If the forward heart becomes suppressed due to an incomprehensible defeat or the like, one may begin to be overly cautions and fearful that may result in a blocked heart. The blocked heart is unaware of its intrinsic power and results in inaction for it doesn't feel it has the ability to do anything. This should not be confused with humility, but rather a weakness of the heart where it is not able to show or express what it is feeling or wants to do. This may lead one to start to complain bitterly rather than to be able to do anything about the situation. A typical symptom of a blocked heart is that you criticize and blame circumstances or others for your failures since you are not able to rise above yourself. In situations like these it is often helpful to have someone pat you on the back and try to give you some of their energy.

FIGURE 33 THE BLOCKED HEART (VIEWED FROM THE TOP) REMADE FROM [17, P. 66]

THE FULL HEART

The full heart corresponds to the inner dimension of the heart, rather than the broad, deep, elevated or forward heart. It is the capacity within itself similar to a container that holds water and the amount of water determines whether the heart is full or not. With a full heart you are harmonized with your surroundings and the people around you. You have a calm, and quiet sense of radiance that you emanate from yourself. You are in touch with your emotions and desires and the deeper wishes of the heart. You enjoy silence and you are always comfortable being alone. Wherever you go you try to represent a beautiful principle or person.
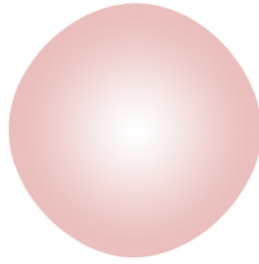
FIGURE 34 THE FULL HEART REMADE FROM [17, P. 68]

The full heart can quickly respond to situations regardless of circumstances, for example moving comfortably from happiness, to humility or peace and is able to relate quickly to external changes. It may be difficult to sense the emotional state of a full-hearted person for it is not always visible. However, the full-hearted has no need to protect himself, and has nothing to hide. Your heart is transparent and can expressed if questioned. The full-hearted may smile or have a delightful expression but it is not often that they will laugh and may show his displeasure in glance but not in word. (For he knows there is no need to blame anyone for anything.)

Some challenges of the full heart is that due to your flexibility to change, you may be hard to read and mysterious. With a full heart you are detached from arguments and may be silent in many cases. No one can tell what side your on because you stand with all sides. The full-hearted has to be aware of this so that he can communicate clearly to avoid misinterpretation of the others around him.

When your full-heart becomes distorted you may feel so content that you lack the motivation to engage, express yourself or act at all. This may cause you to be overlooked and underestimated by others for they do not recognize your inner-greatness since it is hard to pick up externally. The tendency for the full heart to not take action is a distortion of the heart in which it needs to develop its outer dimensions and apply its energy to them. Through this process of working with its outer dimensions, the full heart can become active and align itself with the larger purpose for its development and can begin to influence others.

Another distortion of the full heart is that it can become sanctimonious and result in in-authentic behavior. This may happen in your attention has been solely on yourself and may be putting to much emphasis on allowing positive thoughts, dogmatic behavior, harmless diet etc. in order to maintain 'inner purity'. This hinders the full heart from expressing its natural freedom and responsiveness and is a lack of compromise in order for the heart to develop completely.

THE HOLLOW HEART

The heart that does not have this inner dimension is considered a hallow heart. This heart is easily exhausted by its demands, for instance making personal changes, performing acts of service etc. and the heart has to withdraw in order to recharge itself

again. A hollow heart seeks to avoid conflict and responsibility as much as possible and thus is often drawn towards isolation and nature. A hallow heart may have the impression of having personality that is complete and beautiful, however it will not be able to maintain that image for long or while pressurized under stress. The hallow heart can switch from being deep, broad, elevated and forward to being crushed, shallow, narrow and blocked and therefore the hollow heart tries to avoid change or stress of any kind. If a heart is pushed beyond its limits it has to retract itself and recharge and this can be shown by looking at 'compassion fatigue' workers like health-care, teachers, etc. who get exhausted through their work and get burned out.

The Heart of an Organization

The book "Energize Your Heart" expands the metaphor of the dimensions of the heart to organizations in attempt to create a useful tool in order to see what dimensions within an organization that need to be developed. For the atmosphere of an organization is dependent on the employees within the organization and the combination of their hearts build the organization. The head of the organization can be seen as the leaders at the top, but the heart of the organization may be certain key individuals within the organization (or even outside the organization like an influential spouse). When the heart of an organization changes, it effects everybody involved similar to the pulse that can be felt throughout the body.

The Elevated/Crushed Heart

An organization that has an elevated heart shows signs of excellence. These companies are committed to making the best product even if it does not have a demand from the market place. The employees may be idealistic and the customers may be few but they are enthusiastic. An elevated hearted individual within the organization may be willing to sacrifice his personal benefit for the benefits of the organization or a customer. While shallow hearted individuals will focus on themself and feel self-pity for the oppression the organization is putting on them. Crushed hearted organizations may have lost the joy of working and this reflects in the quality of its products. If the hearts of the leaders are crushed the organization can begin to feel fearful, mundane and oppressed. The company may begin to deceive its employees, clients or other parties due to its pessimism and fear, thus loosening its perspective of the value of honesty and become shortsighted in their actions. Good employees may leave the company since it has lost its joy and/or because they have to compromise their ideals, and customers can become disappointed that the company is not delivering the same quality product that it once did.

The Deep/Shallow Heart

Deep-hearted organizations want to get in close acquaintance with its customers and this reflects itself in their quality of service. The deep hearted within the organization are well aware of all aspects of its functioning due to the close relationships to everyone involved. Thus they are sincere, reliable and everyone likes to work with them. A shallow hearted person may limit themselves to highly repetitive jobs in order to avoid the emotions associated challenge or disappointment. Shallow-hearted individuals are not suited to lead others since they cannot relate to the risks, needs and plights that other employees are experiencing in attempt to benefit the organization. He may seem uncomfortable around others since he lacks the ability to be self-revealing and therefore is not trusted by others. The shallow organization may act as if its customers are interchangeable and does not focus on maintaining their relationships. It may measure its success in the form of numbers rather than human terms; where numbers may represent the past, but the humans in the organization shape the future.

The Broad/Narrow Hearted Organization

The breadth of the heart allows one to be reliable, loyal and a flexible worker. A broad hearted organization has lots of cross-cultural diversity and is open towards many backgrounds and opinions. The organization maintains an atmosphere of teamwork that enables the organization to connect and build alliances other companies and the customers can sense the loyalty that the organization has towards its employees through their interactions. In a narrow hearted organization there is no diversity and there is a requirement of similarity in appearance, opinion and behavior.

The Driving/Blocked Hearted organization

The driving hearted organization has employees that have powerful and purposeful stride. They are highly innovative and are willing to take risks in order to achieve their goals. The leadership has a challenge in such an organization in order to align the individual's goals with the goal of the organizations to ensure that people are not driving in different directions. The organization may have a blocked heart it is not able to accomplish its objectives, this may happen even though the organization is broad, elevated and deep.

Meetings are intense however things are just not moving forward.

The Full/Shallow Heart

A full-hearted person is able to adapt and contribute to different parts of the organization with ease due to their wide range of abilities and interests. The organization is likewise capable to adapt to the requirements of the market by molding to whatever it is called for. The hollow-hearted organization may be successful at the moment, but this state is very insecure. If things stay exactly as they

are now, they will not suffer but if the market requires them to change they may not be able to handle the shift.

Developing The Dimensions of the Heart

Now that I have briefly reiterated the different dimensions of the heart from the book, we can begin to understand how we can begin to develop our capacities in the different dimensions. With the help of this conceptual framework we can begin to analyze our own personalities in the light of the model that is presented. The book suggests three methods of developing our capacities of the heart. These three methods reinforce and support each other and build on each other as they are practiced. The first method is to continuously recognize the dimensions of the heart in everyone you come in contact with. The second method is to discover the dimensions of the heart within yourself that one sees in others, and the third method is to apply these dimensions of the heart to your own life in order to practice and strengthen them with time[17, p. 107].

Recognizing others

As you begin to recognize a heart in others, you slowly become aware of the heart within yourself. By observing others and then using them as an example you can begin to find clues for how develop your heart. You can begin to 'breathe' the hearts of others while you are with them, this can be in shopping lines, at work, school, during conversation, business meetings or anywhere else where one is in contact with other people.

Once you have begun to recognize other people's heart you can begin to compliment what you see. This will both strengthen your understanding of what dimension you are recognizing and in addition make the other individual aware of his own heart. The compliments that you give away eventually come back to yourself, for you revive the same capacities you acknowledge as you compliment. When giving compliments there are three points to remember. "First, be completely positive and leave out any implied putdown. Second, state the observable evidence that supports the compliment, and third, connect the compliment to the persons heart, to make it clear you're talking about the person, not their job or behavior.

For… example, you could say, "You look great," but don't stop there. Add the evidence: "There is a sparkle in your eyes." And then connect it to the inner qualities of the person: "that shows me that the height of your heart." Now your speaking from your heart, about the heart, to the heart of you friend."[17, p. 109] Other examples of how to compliment from may be "You can count on me, anytime, I've seen how you defend other people. I feel a strong loyalty in your heart."[17, p. 110] On the other hand, a way not to compliment is "You a lot of fun to work with when you not mad (You're mad a lot and your difficult to work with)."[17, p. 110]

Your heart has a great influence on others and an energized heart can energize others while consequently a closed heart can close others. Therefore one has to be aware of one's own heart is at all times. There are a few warning signs that may indicate that your heart is already closed namely criticism, pessimism and indifference. When you emanate these traits, then others around you may quickly take on these traits as well[17, p. 111].

Criticism is an expression of disapproval towards someone based on his or her faults. This arises when one is unable to see deep enough into the heart of the other person. When your heart is open you can see beyond the others faults and find the light within everybody, but if you heart is closed you only see the faults. People become defensive when they are criticized and it does not benefit anyone to point out anyone's faults. Besides you can find faults in everyone, for no one is perfect and ultimately the only place where the fault resides is in the mind of the one who is holding a critical view. Pessimism is the lack of hope for the future seen from the perspective of the present. This happens when the heart is depleted of energy and is weak. The pessimistic heart cannot inspire another person. Whatever is said from a pessimistic viewpoint is not attributing value to the potential creativity and power of the heart; neither within yourself nor in the other that you are 'trying to help'.

Indifference is when you don't care about another individual. This state is when the heart is withdrawn, shallow and narrow and is unaware of the connection between people's hearts. When one is indifferent there is no way one can communicate heart to heart with someone and it can cause the other persons heart to feel abandoned. This can be hurtful and breaks the bonds of trust between individuals. If you are self-aware and realize that you are falling into negative behavior patterns that may reflect criticism, pessimism or indifference, you can view that as warning signs that your heart is likely to be low on energy. This means that your heart needs attention and needs to be reenergized to ensure that it will stop having a negative influence on others.

MEDITATION

The second method for energizing one's heart is through Heart Rhythm Meditation. This is a specific mediation technic coined by the Bairs in order entrain the breath the heartbeat. The idea is to begin to recognize one's own heartbeat by either feeling it directly or using another technique like pinching one's fingers together in order to feel one's pulse in one's fingertips, and then to breath in for six heartbeats, then out for six heartbeats. Depending on the different dimension that one is trying to develop the Bairs have supplied different emotional aspects that one can try to perform as one does the mediations and these technics will help expand the heart in the desired direction.

With practice and steadfastness these meditations can become a central part of one's life and can be truly energizing and fulfilling as one begins to come in contact with

one's heart. Practicing some type of mediation is a necessity in order to get in contact with one's heart and one should find the method that suits them best. Breathing techniques and the importance and benefits of breathing deeply is discussed in many sources. I will not go deeper into the meditations in this thesis, however I do value them and I have personally found meditations very beneficial and effective way for me to get in contact with my own heart.

EXERCISES FOR LIFE

The third method is to begin to apply 'exercises for life'. The book supplies different exercises to increase our awareness of the dimensions of the heart as we go through life. They propose eight exercises for each dimension of the heart and in addition share many stories related to these different exercises that they have accumulated during their work as counselors. Some of these stories are helpful in understanding how to apply the different dimensions of one's life in practical situations. I will only present a few here.

EXERCISES FOR BROADENING THE HEART:

- "If there is anyone with whom you would not like to be alone in an elevator, that is your signal that a reconciliation is needed, for the health of your own heart. Take the initiative to resolve you differences with that person so you don't have to fear them or be embarrassed by them. This will bring peace and contentment."[17, p. 127]

  This is a reminder to all of us that hold grudges towards individuals that we should seek them out and try to solve our difficulties. In doing so we show the width of our hearts in it capability to embrace people and can show our integrity and loyalty towards them. If we do not attempt to do this consciously then nature may continuously put into these situations, where we run into these people at the store, at parties on the bus etc. and every time that is our chance to try to smooth over whatever grudges we have towards each other.

- "When the lack of focus, initiative, persistence or success of others around you annoys you, take this as a signal that you need to improve your own self-mastery through concentration on some specific, personal goal."[17, p. 136]

  This is also another typical example of us finding faults in other and not being occupied with ourselves. In these situations we have to become aware of our own objectives and focus on them rather on others. If we can begin to see the beauty in others around us we will no longer be annoyed but rather pleased by their presence.

- "See yourself reflected in another. See how that person is similar to you. See how they become more similar as you feel more accommodation, respect, admiration and love for them."[17, p. 149]

  As we begin to focus more on our similarities rather than our differences we can begin to grow closer to one another. "Differences are perceived by the mind, similarity is felt by the heart"[17, p. 149]

- "Forget the errors of others. Your reproach may make them more resolved in their faults. Do not dwell on your own errors either. People are seldom improved by guilt. Blame no one for anything. Rather, try to understand their reason"[17, p. 168]

  We tend to think that if we point out the flaws of others that they will immediately begin to change. However, this is not usually the case for when they feel blamed they may begin to defend themselves for their behavior and put up walls around their hearts. A great step forward in one's development is if one never blames anyone for anything. This is not being unaware of the challenges that are in life, but rather having the wisdom to show compassion to the people that are involved. When developing one's heart, one should be so involved with one's own shortcomings that there is no time to be concerned with the shortcomings of others. If you are able to control your own speech, this is a sign that you have begun to control your emotions and thoughts too.

EXERCISES FOR RAISING THE HEART:

- "Optimism is you natural condition; optimism comes from love. Consider pessimism to be a warning sign of a weakened heart."[17, p. 179]

  If your heart is deflated and has no energy (no love), it is impossible to be optimistic. Optimism does not come from will power it comes from love. When the heart is full of love, then one can begin to be optimistic. As soon as pessimism creeps into your thoughts, actions or speech you should begin to perform exercises that will elevate your heart.

  "Regret is a waste of energy. The past has given you the present that will be opened in the future. Be resigned to the past, attentive to the present and hopeful for the future."[17, p. 180]

  Considering the past is an extremely valuable way for us to learn as human beings. If we do not learn from it, we will continue to repeat the same mistakes in the future. But the learning mode is not associated with the emotional state

of regret. Grateful acceptance is the emotional state of mind necessary in order to learn from the past. With this outlook we can begin view our past as the perfect preparation for the next step we have to take in out lives. Our future is determined by how much we struggle in the present and with our hearts full of energy we will have the optimism necessary in order to be able to take the next step.

EXERCISES FOR THE DRIVING THE HEART:

- "Have more effect on the world then the word has upon you"[17, p. 208]

  This is something that we are not usually aware of, but we tend to go through life thinking what how the environment and the people around us influence us. However if we flip it around and begin to say 'how can I affect my surroundings' we suddenly are representing a quality of the driving heart. In short, give more than you receive.

EXERCISES FOR EXPANDING THE INNER HEART:

- "Hold your emotion. Do not let yourself express your emotional in a personal way. Hold the emotion until it expresses itself in ways that are loving, harmonious and beautiful."[17, p. 245]

  We should value all our emotions, however we should express them in ways that are loving and harmonious. If we get over excited with our emotions we tend to loose our cool and we can blurt out things that are either premature or unedited and can be counter productive to what the actual message to the listener was meant to be. This can be for both positive and negative emotions. If we are able to hold the emotions and allow them to mature and evolve inside us, then when we finally feel the desire to express them, they will be more eloquent, harmonious and coherent.

- "Do not be concerned with protecting your open heart. What comes out of you heart has more impact upon you than what comes toward your heart."[17, p. 237]

  The majority of other people's attacks on our hearts is mainly unconscious, and tells us more about the state of their heart at that point of time, rather than our own. If we are able to be aware that the other person is upset (with little/no contact with their own hearts) and thus expressing their anger, rage, anxiety, etc. unconsciously, we can try to help them get in contact with their hearts again so they can calm down and see things more holistically. If we are able to shower that person with compassion and understanding then the tension usually dissolves.

With the help of the Bair's book we have been able to construct a framework for the dimension of our hearts. We can now begin to feel our hearts dimensions within us and recognize the symptoms of a weakened heart within ourselves and in others at any given time. We can begin to fill our hearts up by exercising our hearts in their particular direction so that there is energy going into the heart as well as coming out. The more we practice and become aware of our hearts, the more capable we will be to allow it to guide us through our activities. We will be able to communicate our emotions more precisely to others, and also be able to understand others emotions for which we can offer comfort and may give fruitful advice based on our own experiences. By recognizing the dimensions of the hearts in the people around us we can begin to appreciate them more and see the beauty in everyone in our workplace and private life.

To get in contact with our hearts is no easy task. This requires dedicated attention every second of the day. The more conscious we become of our own hearts and its effect upon others, the more we can begin to realize the importance of its development. The impacts of being full-hearted in an organization is immense for then we have a great capacity to handle our emotions, influence others, have a stamina and feel purpose in our work. If we have shallow or crushed hearts we are unable to influence others, we are pessimistic, faultfinding, blaming and have lost the joy necessary to be constructive and productive to the whole. It is the responsibility of every individual to develop their own hearts for they are the only ones that can do it. The more genuine and painstaking effort one puts into it, the more pure-hearted you will become.

A.6 Looking at Human Values

As I mentioned earlier, my experience in Bhutan was not sufficient in my opinion to satisfy my investigation of human values. However, I knew human values are crucial for understanding innovative climates and this is what I ended up with. This chapter was by far the hardest to write; however it was also the most rewarding. I hope you enjoy it as much as I did.

Understanding Human Values

Ultimately, our behavior in our organizations is dependent on how we attribute value and how we make value judgments. In order to make the shift from understanding why giving is important to corporate culture and innovative climates, we have to understand the logic behind attributing value. Hopefully through this logic we will understand better why it is important to get in touch with our hearts, *why* we need to give, and motivate us to make more accurate value judgments. We know that any rational system of values holds to the logical principle that lower values are means and higher values are ends, no matter what the value system is. And therefore immorality is to sacrifice higher values for lower values. In other words, make lower values ends and make higher values means. And we have to make sure we have a thorough understanding of this, so that we don't make the mistake of mixing means and ends up, because as we have seen with 'the box' and as we will see, this is easy to do. I will humbly try to put forth a perspective from the mathematics professor William S. Hatcher on the matter of human values that can be found in his article "Human Values" and "Powerseeking and Ideology" from The William S. Hatcher Library. I found this to be the most insightful in my research on this topic. In order to follow his logic and definitions, I have at times directly cited his article and elsewhere only slightly rewritten his ideas.

Ultimately it is our actions that represent our values most accurately. I may say that I do not enjoy coke, however if I continuously drink large quantities of it, it would be logical to assume that in fact I do like coke. In other words if I repeatedly attempt to experience something I claim to be positive it would be reasonable to conclude that I actually value such that thing positivity and on the other hand if I try consistently try to avoid something I value that negatively. However there are people that argue that there is in fact no common basis which human beings have in order to make their judgments. From this view one could argue that according to one's life circumstances and reaction to these circumstances, one may begin to value positively anything; for instance pain, suffering, the repulsive, the ugly etc. by citing to people that prefer such pursuits, for example sadomasochist. However, there is a fundamental error in this kind of argument, which Hatcher addresses. Although there exists extreme individual differences in preference in the world, this alone does not refute that there is not an

underlying, fundamental and universal basis for most preferences. These extreme cases or deviations from the basis, only take place within certain limits.

One can view any two units in existence and compare them according to their differences or their similarities. At the extremes, they are similar to the extent that they both exist, and they are different in that they are not the same thing. However, within the spectrum between the two one can conduct one's analysis. Since we are human beings *doing* the analysis, there are also objective and subjective differences and similarities between the things being perceived, and the relative value we choose to allocate to these differences and similarities in each case. In order to understand this idea, we will use the example of an infant being subjected to honey and quinine in order to illustrate that a child *brings* a relative reaction to his encounter with reality. We choose and infant because he has not yet been socially conditioned and therefore one cannot argue that his social environment affects his behavior. Now if the infant is subjected to quinine he will give an obvious response of recoil or evident dissatisfaction, while if one puts honey on his lips he will show signs of pleasure. The baby will try to avoid quinine (by crying, recoiling etc.) while he will seek to repeat the pleasure the taste of honey. This is an expression of a value judgment that the infant performs as he reacts to the different substances. One can argue that this is a reflex deriving from the structure of the infant's nervous system, which is plausible. However, the point is that that the baby's value reaction is universal. "Thus, some purely individual value judgments are universal in that (1) they are shared and exhibited by all normally endowed humans and (2) they are rooted in a human nature that is essential in the precise sense that it inheres in the human genome and precedes socialization."[26, p. 2]

With the help of this example we can see that socially learned cultural values are not the primary values, but that that they are cultivated on a foundation of innate value preferences. For instance the reason that communities around the world have organized the production of honey on a different scale than quinine is because we have collectively learned that honey tastes good and is nutritious, while quinine is not. One may argue from the perspective of cultural relativism that one could condition a person to find honey distasteful and would prefer quinine. However, this socialization does not prove that there are not fundamental natural preferences from birth. And that one could view these people as exceptions to the rule, where one would want to ask "why has this person developed such a dislike towards honey?" while if one would like honey, that would require no further explanation because it would seem natural to do so and could be seen as the 'default' position to have.

We can break down the experience of tasting honey into at least the following parts:

1. There is an objective difference between quinine and honey, ultimately based on their molecular structure.
2. The capacity for a human being to sense through his sensori-neural apparatus the difference of these objectively different substances.

3. The relative value given to the experience of the difference; either positively to some degree or negatively to some degree.

The shift from objectivity to subjectivity occurs at the second stage of the process where the substance provokes a different inner state in the individual. However, this subjective experience of the substance does not in itself imply that two individuals may not give equal value to the same substance. For instance two people may experience honey differently but still value it equally. Contrarily, experience something negative differently but value it negatively to an equal degree. So we can see from the components above that value judgments are based on the ability of the organism to differentiate two experiences at 2, however contributing value cannot be reduced to the simple fact of difference. It can be said that our judgment then arises from the perception of the perception of the two different substances; not simply that they are different. Thus the value contribution is not an innate attribute of the primal experience of the substance, but is rather gathered from the consequences of that experience. (Where the consequences of the experience is either pleasant or unpleasant in the situation above.)

If we increase the complexity of the experience, that will result in increased complexity of the consequences. If a human has matured to a point where he has sensori-neural sensibility and self-awareness, then the point of value judgment (third component above) will have an increased amount of autonomy. For instance a autonomous human being may say after an experience of a drug euphoria "That the experience was great, however ultimately dangerous for my overall well being and therefore should be intentionally eschewed in the future." Value judgments like these are extremely sophisticated, and require a degree of conscious knowledge both of oneself and reality. Nonetheless they still follow the same three-part process illustrated above and the value judgment is a consequence of the experience. The additions to the previous example are that the individual has knowledge about long-term consequences as well as the short-term consequences. Where short-term consequences are that 'the experience was pleasant' however the long-term consequences are that 'drug usage can lead to addiction and ultimately loss of autonomous behavior'.

With this we can see that although knowledge or socialization has radical effects on human value judgments, it doesn't mean that all human judgments are absolutely social in nature. This is because we all have similar judgments to primal experience where we inherently value some aspects of existence as relatively pleasant or relatively unpleasant. This binary distinguishment between pleasurable/unpleasurable or good/bad is rooted in human nature, and therefore is universal. Thus we have value judgments that are universal and transcultural and value judgments that are brought about by socialization.

These examples only consider the basic physical instincts of man. However, one could be led to ask are the higher order or moral judgments of human existence completely

culturally determined? In other words are there universal *moral* values in human existence?

We are still speaking of values generically as brought about but the three-step process above when we converse about 'moral values'. These 'moral values' become apparent foremost in inter human interactions and involve judgments about how we experience ourselves as well as others. For example all humans experience love and kindness positively and hatred and cruelty negatively which is a scientific fact of human nature. This can be confirmed by psychologist with various approaches and even Sigmend Freud's theories, who was not a moralist, supported the thesis that human personality was significantly determined by one's early experience particularly the quality of the interpersonal relationships by one's guardians.

Further, it is the essential human nature that is the ultimate source of all value judgments (either positive or negative) and "this observation suggests the highest value in creation[13] … is that intrinsic and essential human nature from which all value judgments flow. That there *is* such a universal human nature is a Platonic hypothesis, which can be confirmed but not proved by observation alone."[26, p. 5]

LOOKING AT THE PLATONIC HYPOTHESIS

After observing that the majority of infants (except for a negligible few) respond positively to stimuli such as love and honey, while the majority (except for a negligible few) respond negatively to stimuli such as cruelty and quinine; is this proof enough that there exist a universal human nature? It does strongly suggest that such a human nature does exist, but in order to get a stronger hold on the matter we have to look at the metaphysical basis of human nature itself.

The traditional materialist view often support the idea that humans are just a particularly evolved species of animals whose nature at any point of evolution is determined by present time physical parameters. However, we have observed that the human being has not changed dramatically for at least ca.10000 years and it would seem very unlikely for it to happen in the near future. Nonetheless, from this materialistic perspective, it is questionable to suggest that there may be a universal human nature. This is because with such a statement we cannot exclude the possibility that the physical parameters may change and thus radically alter our intrinsic value judgments in response to stimuli. It would then be feasible to say: with the possibility of such drastic mutations there could be no consistency at all to our spontaneous value responses to stimuli and thus no ground whatsoever to find anything universal. But in response to this view, we cannot make *any* general statements about human nature at all, for if we did it would only describe human nature today, human nature yesterday

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[13] Notice that this says creation and not in existence.

and tomorrow etc. There would be no certainty that some fine or trivial genetic mutation could alter something we now consider vital. If we assign all uniformities of spontaneous value judgment to existing random genetic organization, then we cannot talk about human nature as an existing entity in itself. And without any foundation for discussing human nature at all, all-human knowledge, as we know it, collapses and falls to the ground. Right can become left, up can actually mean down, good can mean evil, hot can be cold and in other words we have no set of truths to work with for we have no guarantee that some random mutation may come along and change the way we respond to stimuli.

"We therefore posit, as a fundamental metaphysical truth, that there does exist an intrinsic, essential, universal human nature, and that observed uniformities and regularities in spontaneous human value response to external stimuli reflect, *albeit imperfectly and approximately*, this human nature." [26, p. 6]

HUMAN NATURE

"The fundamental (although not exhaustive), characteristics of essential human nature are:" [26, p. 6]

- Consciousness- the existence of a subjective world of conscious inner states within each individual
- Mind- the capacity of this conscious subjectivity to reflect or model, if not perfectly at least significantly, the structure of the world outside our subjectivity
- Heart or affectivity – the capacity to feel certain emotions or subjective sensations, most particularly the capacity to experience the emotion of altruistic love
- Will and intentionality- the capacity to contemplate and execute certain courses of action

These are not all the characteristics of man, but human existence includes at least these capacities, and is sufficient for the analysis of universal values. Furthermore, we can consider all human values and value preferences to be produced by an appropriate combination of the fundamental human capacities of consciousness, mind, heart and will. If we then in this context use the logical principle of that a cause or origin is greater than its effect or product; "we arrive at the conclusion that essential human nature, as outlined above, is the highest value in creation."[26, p. 7] For we use our consciousness, mind, heart and will to derive what we find valuable, and the source of those capacities is the human being which then is the most valuable thing of all.

Thus with this objective conclusion, which is independent of all subjective value preferences, we can begin to judge our individual, subjective value preferences with the help of this truth. "A value judgment will be *true or accurate* insofar as it is based on, and in conformity with, the truth of the value supremacy of our common humanness. True or accurate value judgments thus arise from a certain kind of knowledge, namely the recognition that there is, in creation, no value higher than the human being."[26, p. 7]

Value Hierarchies

In the structure of reality, the value-supremacy of essential human nature is the highest step in a continuum of inherent objective values. Thus we can have an objective value relation between any two entities in existence, A and B where A is more valuable than B, and human nature is the value-supremacy. Furthermore, this value hierarchy is also reflected in nature by the entities complexity when viewed as thermodynamic systems. In short, nature being governed by the second law of thermodynamics, we can assume that the more complex a system, the more value it has.

At the lowest end of the scale we have inorganic substances such as minerals, rocks etc. which have the simplest structure, and have the capacity to radiate and absorb energy. After inorganic substances we have plants that are more organized and can not only absorb and radiate energy but can ingest inorganic materials in order to increase their own complexity or in a word; grow. The next in value are animals that, have all these lower capacities, but also have sensibility and mobility. These new capacities allow the animal to process a wide range of energy events by an individual response. Finally humans culminate all the lower capacities but in addition have the ability to process energy in its most refined form, namely abstract or symbolic information. Humans have the capacity to ascribe meaning or significance to arbitrarily chosen symbols, that have nothing to do with the physical form or the shape of the symbol itself. We can now see that the hierarchy of value of the human being is also represented by known objective dynamic systems. In other words, the more complex the organism is, the further away it is from the thermodynamic equilibrium and thus it has an increased level of sophistication and versatile functioning.

"Thus …. morality and moral values arise, on the one hand, from the existence of an objective value hierarchy that is embedded in the very structure of reality and, on the other hand, from the universality of essential human nature, which allows us to apprehend this value hierarchy and act upon this understanding, if of course we choose to do so."[26]

LOVE

In the light of this argumentation we can begin to understand what it means to give human beings supreme value. How humans respond to what they perceive valuable is complex combination of thoughts, feeling and actions that we call love. This recognition of value causes us to be deeply attracted towards the valued entity and we begin to develop a yearning to know everything about it, serve it and enhance it. If our perception of value is true, our love will grow and develop; however if our perception is an illusion, it will eventually prove false.

Genuine inter-human relationships are based on the true recognition of intrinsic value each of the other and of the self. What we see in the other is the intrinsic, essential and universal humanity that each one of us possesses and is a representative of. I recognize that you are a human being with feelings, emotions, dreams, thoughts and hopes just like me, and therefore I will show gratitude for your happiness and compassion for your suffering. When I understand these fundamental similarities, I realize that many of the things that cause me to suffer, will likely cause another to suffer and similarly, things that make me happy are likely to make the other happy as well. Thus I can begin to conduct my actions in a way that reflect that I am concerned of the others well being and will to the best of my ability try to avoid being the cause of deliberate suffering towards another person.

This fundamental recognition of intrinsic value allows for the possibility for altruistic love to become established and develop. There are two fundamental components to altruistic love, namely *concern* and *acceptance*. Concern meaning that we truly yearn for the well-being and the autonomy of the other individual; and acceptance meaning that we love the other for what he is, not because of what he isn't. The other person is an imperfect representative of a human being with supreme value. Even though he may be challenging and provocative towards us, we love them for *who they are;* because of our ability to accept them. We require no preconditions towards the other and we do not require him to be something he is not, in order to be deserving of our love. We love that person nonetheless. When human beings enter into a mutually loving relationship both parties benefit from the transaction. For it feels good both to give and receive love and the more love one feels, the more motivated one is to give love back.

A very important aspect to understanding the force of love is to realize that power cannot control love. It is impossible to will oneself to love somebody. No matter how much power one has and no matter how much force one applies to a relationship, power will not be the source for what creates the love between the individuals. For instance, it is impossible to will a child to love you. One has to create the *circumstances* for love to grow and flourish. Similar to magnetism or gravity, love is a purely attractive force that acts according to certain laws and principles. We have to apply the circumstances necessary for love to appear and then, we can become instruments

(similar to a magnetized iron rod) through which the force of love can act. The recognition and implementation of such conditions that are necessary for love to develop and flourish is called justice. "Love and justice go together: love provides the motivation to serve the other, and justice provides the knowledge necessary for the proper and efficient implementation of this motivation."[27, p. 1]

'Authentic' relationships are based upon recognizing each other's intrinsic and universal value. After I have the ability to recognize intrinsic value, I can begin to see it in myself and in others. This creates a symmetrical relationship, for both parties agree on each other's supreme value and show mutual love. This is experienced as positive for both parties for love begets love and is inexhaustible source, a true win-win situation. On the other hand, power relationships are a zero-sum game, for they are asymmetrical by not giving value to each other's intrinsic nature. Since it is impossible for both parties to be have power over each other at exactly the same time in the exactly the same way, they come into a power struggle and it is impossible to attain authenticity when one is seeking power.

It is then incompatible to seek love and justice at the same time as seeking power. This is because when one is seeking power, one has to give preference to one's own needs. Therefore stifling one's feelings of compassion for the other's suffering. If the powerseeker was truly seeking love and justice, his feelings of compassion would cause him to stop the suffering he is inflicting upon the other. Therefore to seek power and to seek love are like fire and water, they are incompatible. In order to seek love, we have to renounce the pursuit of power.

Furthermore, the pursuit of power can only lead to an unstable or temporary happiness on the part of the winner. For it is flavored with a fear of somebody more powerful stealing the prize at some later time. While on the other hand true love leads to lasting happiness and well-being. Therefore due to the consequences of the love experience (which are positive) compared to the consequences of the power experience (which ultimately are negative, especially when compared to the love experience) we can see that love is more valuable than power. Thus the most influential indicator that relationship is in conformity with the value supremacy of the human being, is if there is a presence of altruistic love.

Ultimately the signs for altruistic love can be seen as how we treat each other. If we continuously treat others with compassion, helpfulness, kindness and respect we can show that we ultimately recognize their intrinsic value and love them. However if we treat each other with cruelty and unkindness we cannot claim that we truly love that person. One has to walk to the walk not just talk the talk in order for the love to appear in the relationship. The heart of an individual is what motivates both altruistic and selfish desires. In order to be able to be consistently be encouraging, kind and perform acts of true service one has to have the capacity to practice altruistic love. It would be illogical to consider a person that regularly performs cruel and selfish acts to be, underneath it all, a kind and loving person. We can say that a person that

practices altruistic love is truly happy for he is acting in accordance with the value supremacy of the human being, while a person that is selfish and cruel will not be able to sustain a sense of lasting well-being.

From this explanation it is reasonable to view human beings as the ultimate value and can begin to act in accordance to that newly acquired knowledge. However, in spite of this realization we still can observe that human history is full of accounts of humans pursuing power and thus unconsciously brought upon themselves their own unhappiness. Why is it then that we struggle so much to understand this basic principle of morality? That we can begin to view humans as an end and not a means? Nearly everybody will agree to the proposition that human beings are the highest value in creation, yet so few truly act in conformity with that principle? Why is this so? Hatcher addresses this problem in his chapter "Power-seeking and Ideology".

POWER SEEKING AND IDEOLOGY

We have now shown that it is up to the individual to recognize the moral imperative of our universal humanness as human beings. Once we have been able to do that we can begin to be instruments for expressing altruistic love to the people around us. The degree in which we have understood this concept can be demonstrated through our deeds and actions in how we treat others and ourselves. At the extremes, continuous acts of kindness, encouragement and giving help and service to others cannot exist without altruistic love. Consequently cruelty, powerseeking and selfishness is impossible with the presence altruistic love. In light of this it is useless to say that one a person is kind and loving underneath the hard, cruel and selfish exterior. You are either consistently kind and helpful towards others or your not. These selfish behaviors of cruelty and oppression are acts from the heart and are not accidents by nature (with the exception of certain legitimate mental illnesses). Likewise, acts of service, helpfulness and kindness are also from the heart and if they are consistent in one's character rather than separate sporadic events, it could be a positive indication that the performed actions are motivated by love. Why is it then that our human history is full of acts of cruelty and oppression? Hatcher elaborates that it is a misunderstanding of seeking happiness by seeking power and legitimizing these actions by adopting ideologies. Hatcher walks us through this logic. And this should help us understand why we get in 'the box', have a 'heart at war' and stop giving.

THE LOGIC BEHIND POWERSEEKING

In order to understand the logic behind powerseeking, we need to have conceptual clarity on what we mean by power. Abstractly, power is roughly equivalent to energy, the ability or capacity to perform work. An individual's inner power, or autonomy, is proportional to the degree in which he has developed his intrinsic capacities of the mind, heart and will. We are born with these capacities, however when we begin life

we are helpless and dependent upon others. At that point our intrinsic capacities exist, but they are not yet developed. As we interact with our material and social environment our capacities become gradually realized as abilities. In other words, as grow we acquire physical, mental, emotional and voluntary powers. The capacity we have is analogous to our potential for autonomy while our abilities represent the degree of achievement of our autonomy.

Furthermore, I may acquire the power to do something but that does not mean that I will actually do it (for example to help someone or not). I may choose deliberately not to perform a task or I may be prevented to do so because external circumstances may overcome my abilities. This choice of being prevented is not entirely passive either, for I could choose to do something else. Thereby, good and evil result from how we choose to use our power, not merely from having the fact of having power. Power is morally neutral it is neither good nor evil. However, to have power is to have the possibility to perform good or to perform evil. An infant is not responsible for his actions for he does not yet have the abilities of both conscious choice and effective action. But as we grow up, we take part in the process of self-development, which is that we begin to actualize our capacities as abilities and slowly increase our responsibility for our attitudes and actions. This implies that as we increase our powers (the abilities to do work, and become localized centers of power) we also have responsibility for how we chose to do our work and which tasks we choose to do or not to do.

There are relatively good and bad ways to use our power according to universal morality and whether we either do good or bad depends on two things: Firstly, on our knowledge of moral principles most importantly the universal principle of altruistic love based on the value supremacy of the human being already introduced. And secondly, the desire or motivation for which we take action to apply what we perceive to be good. This motivating factor or purity of intention is the most important factor of moral action. This is because we can learn from the actions that we have performed in ignorance and can correct our mistakes. Thus exchanging our faulty understandings of moral principles and realities with more accurate ones. On the other hand if our desire or motivation is weak or even worse, consciously misguided, no amount of knowledge can turn us into doers of good. This is because we are either consciously and actively intending evil or we do not have the motivation or moral courage necessary to perform good in the face of resistance or opposition.

Hatcher sums up this truth by the slogan: "good and evil is a potential that lies within the heart of each individual."[23] This makes it clear that there are no "evil people" that are solely responsible for all the human misdeeds. If this was the case it would be easy to structure society in a way that would identify, eliminate or restrain them from taking action and thus permanently eliminating all evil (or at least evil deeds) from

mankind[14]. From this slogan we can see that this problem of morality ultimately localized within of the individual, however it is universal and shared by all human beings. The problem is how we decide to use the powers we have, either with misdirected weak intentions based on inaccurate moral knowledge or with good intentions based on accurate moral knowledge. This understanding corresponds with the themes of the great writers of history for example Ibsen, Dostoevsky, Victor Hugo, and Shakespeare. That it is ultimately the choices that we make as individuals that are either in alignment with the love principle or not.

CONSEQUENCES

In the light of this, we can ask ourselves are there objective consequences to our immoral actions? Or are the only consequences of immorality the subjective devaluation of our self-perceptions and criticism from society? If we look from the perspective of what we have discussed about altruistic love, there is a clear 'yes', there exists other objective consequences to immorality. If we recall that the love principle is based on the knowledge that the human being has the ultimate value in creation, by performing good deeds we strengthen the value of our universal humanness and we develop properly the intrinsic capacities of mind heart, and will. In short, we are continuously out of 'the box'. These actions will inevitably result in an increase in well-being or stable happiness and also an increase of inner development or autonomy. While on the other hand, immoral actions will result in unhappiness for we will no longer living in accord with the principle of love which is the source of our well being and we will be decreasing our autonomy by being unnaturally dependent on others or circumstances for our support rather than ourselves. This process of loosing our autonomy is very subtle and hard to notice. This is because of time. Similar to the story of the frog that jumps into boiling water will immediately jump out again. However, if the frog jumps into cool water and the water temperature gradually heated up to a boil, the frog will not notice the slow increase in temperature and eventually be boiled alive.

The consequences of our actions are not immediately detected. Examples of this can be the gradual slipping into hurtful dependences like drug addiction; we don't realize that we are addicted before it is too late. These actions may give us a temporary or immediate ego gratification and since the immediate consequences of our immoral actions are not visible, we often just shrug them off by saying 'what's the big deal'? However, it may be very difficult to undo the damage once the unhappy long-term consequences set in. The loss of respect from a child or spouse that has been wrongly

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[14] This is usually what happens in movies where the distinctions between good and evil are so clear, that once the evil has been removed the movie is over and there is a happy ending. But in real life there are endless shades of grey that make the distinction between good guys and bad guys much harder to distinguish.

abused over time may cause grief that lasts a generation. Yet how difficult it is to notice that this is the course we are on, as we perform our daily actions.

As we act in accordance to the love principle of universal morality, we gain our autonomy, which means that autonomy is a moral good. The highest form of autonomy is then moral autonomy, which is the increase of ability to act responsibly. The way we achieve moral autonomy is by practicing autonomy, in other words consciously exhorting to increase one's understanding of what is good and our motivation for the implementation of this understanding as it is attained. "Autonomy begets autonomy (a virtuous cycle) whereas dependency begets dependency (a vicious cycle)."[23] What this means is that by using our intrinsic capacities of heart, mind and will, we develop our heart, mind and will. We thus we have a first order process of autonomous moral functioning which is the proper use of our heart, mind and will and a second order process by which we learn how to continually increase the first order functioning which happens simultaneously. In other words, the more we learn, the more we learn how to learn.

Through the process of self-development our abilities or powers will increase, however we never seek to increase our power in itself. What we are seeking is autonomy, authenticity and well-being and in consequence of seeking these goals, we increase our powers. However, at any point of time during the process we stand in danger of misusing our power, which will result in a hopefully temporary regression of our development. This will represent itself in a consequential decrease in our powers and certain loss of our autonomy. We loose our powers if we choose to misuse them.

External Power

Up to this point when we have spoken of power, we have been talking about 'internal power' because it is a power that arises from the development of our inner intrinsic capacities. The second connotation to the word 'power' may be designated to 'external power' or 'outer power'. This 'external power' is the degree of control that an individual may have over human and material recourses in society. It is the social power that comes from the status or role one has in society. The amount of power one has is the degree in which other people in society allow this person to make decisions on material and human recourses. This is usually the designation that is referred to when we say that a person is powerful in society. This may be successful businessmen, politicians, administrators etc. however it does not say anything about their internal power and their degree of self-mastery. In short we could say that internal power is power over self, while external power is power over others.

The morally autonomous person has the internal power to be able to choose what he desires to choose or what he feels morally obliged to choose. While a person with external power can make others choose what the person with external power wants them to choose. In other words the person with external power is compelling another

person to make a choice. Seen from the perspective of an individual there is always free choice, so no one is absolutely compelled to choose against his or her will. But in some cases the refusal to consent with an externally powerful person may have devastating consequences either social or personal for the individual. Some consequences may be public humiliation, torture, death, imprisonment or other forms of degradation. Under such circumstances there are very few that may have the internal strength to resist such humiliation. The way, in which this external power is often demonstrated, is by the guarantee of reward or by the risk of punishment or withholding the reward. Therefore in order for a person to have external power he must have, or at least be assumed to have, control over the social recourses that would enable him to either provide punishment and/or reward.

From this explanation it becomes clear that the amount of real external power over others is inversely proportional to the amount of internal power within the others. But what we must understand is that it is not a zero sum game between the increase of my external power over you and your internal power to choose freely. Your internal power can develop independently of my external power over you because your autonomy is attained by the process of self-development, a process that is almost entirely a responsibility of the individual and not dependent upon external conditions. This is not a power struggle however, for as mentioned earlier the process of self-development is a process to attain authenticity, autonomy and well-being not to attain power. And thus the confrontation between my external power over you is just a measure of how much moral autonomy you have relative to when you are confronted with a certain degree of external power.

Competition for an increase in external power is a true power struggle between two people. This is a zero-sum game because there is no way that you can have power over me in the same way at exactly the same time as I have power over you. Therefore in a competition for external power, your degree of increase in external power requires an equal degree of decrease of my external power. But as we have already discussed, it is impossible to attain authenticity by the competitive struggle for external power. It is only an increase in internal power that can do that. Furthermore, since the development of internal power is almost entirely up to us, it is the only thing that we truly possess. While on the other hand, external power can be taken from us when confronted with a more powerful person at any given time. "External power is largely in the hands of others, whereas internal power is, for the most part, in our own hands."[23]

As we have discussed earlier, external power in itself is morally neutral. For instance the teacher has external power over student, the parent over the child, the doctor over his patient. That fact that someone has power over another is neither good nor evil, the moral dimension becomes relevant when observing in which way we choose to implement this external power. The teacher may contribute to the intellectual development of the child or ruin his thirst for knowledge, the doctor can humbly try to heal his patient or cruelly enforce his superiority. Or the parent may lovingly

encourage the child's process of self-development and autonomy or seek to keep the child in a state of submission, fear and dependence.

SUM UP

We have discussed that power is the capacity to do work and that power in itself is morally neutral. Moral imperatives become apparent when viewing the motivations from the heart. These motivations are actualized whenever our free will makes choices about what we want to apply our energy or power to, as we strive to attain our goals. When we have external or internal power we have the possibility to do either good or evil, but without power we can do neither good nor evil (for instance an infant). When we live in accordance to the universal love principle and the value supremacy of essential human nature and act upon that knowledge we use our power for good ends. However, if we do not do so, we misuse our power and suffer objective negative consequences for such actions (loss of well-being, authenticity and autonomy).

Now that we have introduced some concepts about power, we are in a position to be able to gain more understanding about the logic of powerseeking. To begin with, we realize that we are needful creatures and are not self-sufficient beings. As infants our needs are met (or not met) by our parents or other more powerful guardians, but as we grow older we make use of the process of cause and effect in order to satisfy our needs. It is impossible to be unhappy if our essential needs are continuously unmet and thus it is logical to assume that with the more power (especially external power) we have the more capable we are to satisfy our needs. It then seems reasonable to assume that by increasing our power to compel others to efficiently satisfy our needs, we will attain happiness.

However, the problem with this otherwise flawless logic is that no matter how much power one has, that power will never satisfy our most basic and universal need of giving and receiving love. This of course is because love cannot be forced or compelled as we have discussed earlier. Furthermore, the possibility to love altruistically depends on the internal power of the individual, which is only attained through the process of self-development and not the pursuit of power. Thus in order to pursue good we have to use power as means and not the end. If we pursue power as an end, in an unconscious attempt to pursue happiness or good, we have to sacrifice universal and essential human nature for an increase in external power, which is a contradiction and is futile. The only way to attain lasting well-being and genuine autonomy is through the process of self-development and authenticity.

IDEOLOGY

Hatcher continues his argumentation to include a way in which we as humans have attempted to legitimize powerseeking, namely ideology. Up to this point we have

talked about external and internal power, however from now on we will be talking about external power, which is the amount of dominance an individual has over others. To be a seeker of raw power is perceived negatively in most cultures. If I am openly seeking power, others may begin to apply resistance strategies that make it more difficult for me to succeed in my pursuits. In addition, other powerseekers may be provoked by jealousy or competitiveness and will be induced to come into a power struggle with me. In such cases, it is likely that at some point my opponent will be willing to go to further lengths or have a more efficient strategy for seeking power than me, and I will eventually loose the power that I have gained. And if not, I may eventually be led to a situation where I have to make a choice between loosing my power on the one hand and extreme moral compromise on the other, where I may have to betray, kill, murder or sabotage others in order to keep my power. Which exposes the fragility and danger of the powerseeking game, for one risks loosing one's power at any moment.

For the powerseeker it would be ideal to have a strategy that allowed him to efficiently pursue power without receiving resistance from others. And better yet, even receive others active participation in helping this process. One would think that this is impossible, but as Hatcher clearly points out, this is the strategy that powerseekers have used all throughout history. In order to understand how powerseekers have done this, we have to understand what is an ideology.

"Again, as with power, we need to proceed carefully in order to maintain conceptual clarity. By an idea we mean a thought or mental conception. Ideas can usually be expressed or articulated as propositions, i.e., statements that affirm or assert that reality is configured in some particular, given way. By a belief we mean an idea plus a value given to the idea: a belief is a valued idea. An ideal is a belief that expresses how we think reality should be configured. A collection of ideas is a theory and a collection of beliefs is a belief system. Finally, by an ideology we will mean any belief system that contains some belief whose value is considered greater than the value of universal, essential human nature. An ideology thus asserts, in some manner or another, that human beings are not the highest value in creation, because it considers at least one of its beliefs or doctrines as higher than humans."[23]

Usually the word ideology is understood to be something that resembles what Hatcher calls belief system, while with his restricted definition it is understood that an ideology is a belief system that holds that one proposition, doctrine, or idea is valued more than the universal and essential human nature. With this definition, an ideology violates the principle that human beings are the highest value in creation and thus cannot be conducive for the lasting well-being, authenticity and autonomy of individuals. Since the majority of people assume the value supremacy of the human being is true, one would think that ideologies are uncommon. However, with closer investigation Hatcher points out that most historical belief systems have developed into ideologies by social evolution or have started as an ideology from the very beginning.

If we take a look at Christianity for example, we can see from the New Testament that the main message is the principle of universal altruistic love. This is the same principle that we have discussed earlier and is the only possible supreme value if we accept the Platonic assumption that a universal, human nature does exist. This principle was illustrated by stories parables in the Bible but there is no doctrinal criterion of beleivership in the Bible. In this regard, the Bible only says that the true followers are those who love others even as He (Jesus) has loved them. With time however, a number of basic doctrines became woven into creed (more specifically during the Council of Nicea 325 A.D.) where it was held that whoever failed to accept any part of the creed was an infidel and was therefore subject to sanction, even death. From this time onward, what it meant to be Christian was to first and foremost, be doctrinally correct, and only secondarily exercise the universal love principle. At this point, Christianity as taught by Jesus, was transformed into an ideology where certain doctrines, ideas or ideals were held over the supreme value of the human being. It was then morally legitimate for Christians to sacrifice other humans in order to uphold or protect these selected doctrines.

Massive killings such as the Crusades, the Inquisition, the Catholic-Protestant clashes, the first and second world wars when Christian nation fought against Christian nation, were all done by people that thought of themselves as good Christians because they followed the doctrines of their Church. There are many other historical events that resemble the case of Christianity, but is particularly staggering since the principle of altruistic love is so clear in the teachings of Christ. "The spectacle of human beings killing each other *in the very name of* a religion based on universal love shows the capacity of ideology to give moral legitimacy to virtually any cruelty whatever. If we humans can rationalize murder and torture in the name of love, then we are capable of rationalizing anything[15]."[23]

What we need to understand in light of all this is that for any moral system, social movement, branch of science, philosophical system or religion has to be founded on principles in which the followers see to be true. With the value system that regards the human being as the most valuable thing in creation in turn, supposes that their does indeed exist a universal and essential human nature. All our other true beliefs have to be subservient to what we view to be the most valuable, namely the human being. We create our belief systems by making value choices, and we have to be aware that these belief systems should serve human beings not enslave them. With this in mind, we

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[15] In one form or another, all the major religions have taught that the human being is the supreme value in creation. However, over time all religions have legitimized cruelty towards either their own believers or others in the name of upholding their ideologies. The major religions did not start out as ideologies, but slowly transformed into them. Fascism, communism and other social movements were ideologies from the start and thus did not undergo the transformation process of becoming an ideology.

should be aware the *belief* that the human being is the most valuable thing in creation has less value than human beings themselves. And if at any point in time the system we create states something different than this, it should be discarded and reevaluated. If we just add the metabelief that one or more the principles within a valid belief system have more value than the human being, we have suddenly transformed the belief system into an ideology, which unfortunately really easy to do.

This can be illustrated by an example (which interestingly enough resembles the plot in most modern thriller movies). Namely, we agree that it is true that the world would be more ideal or a better place if all people were supremely kind. In addition, we also agree that it is true that in the world some people are more kind than others. Thus in order to achieve this ideal, we make a plan to kill all the unkind people in the world. The result will be that there will only remain kind people, and our ideal will be achieved. However, now that we understand the hierarchy of values, we realize that this logic is flawed. For we see that in an attempt to achieve what we perceive as a just end (kindness) we have used unjust (unkind) means. Thus we have sacrificed the universal love principle by committing unkindness to all of mankind, or in other words, trying to spread kindness by exercising unkindness, which is logically impossible. What we actually meant when we agreed to the ideal that everyone should be kind is that kindness should be spread from kind people to unkind people, and by those means eventually become universal. But due to our disorientation of values we unconsciously contradicted ourselves.

This can happen no matter how altruistic or humanitarian the original belief system was, and it seems as if the more altruistic and humanitarian the belief system, the more justified one feels for the cruelty one performs in its defense. "One could hardly feel more justified than when one kills in the name of a high humanitarian ideal."[23] This can illustrated by the acts led by Joseph Stalin as he killed thirty million of his own countrymen in order to preserve the doctrine of communism. He obviously didn't do this on his own and had help from people that also were willing to kill others in the name of their ideology. Similarly, the Nazis fell into the same trap, and when asked why they did so, they said that they were only 'following orders'. Thus admitting to their complete loss of moral autonomy and were only acting on behalf of their ideology which they gave responsibility for their doings. They had no inner power and therefore no sense of individual responsibility and sacrificed all their inner power and freedom for the pursuit of external power.

"We can now draw certain direct conclusions. (1) Ideology (which holds certain doctrines superior to human beings) gives moral justification to cruelty towards human beings. (2) Ideology generates complicity in the power principle rather than resistance to it. Thus, ideology has been the method of choice by which powerseekers have gained the cooperation of masses of people, people who were themselves victims of the very power. By means of ideology, a charismatic leader enables his followers to identify with him and his power, rather than with themselves as victims of the power.

People vicariously participate in the leader's power and gain thereby the illusion that they themselves are powerful."[23]

To Sum up

As mentioned earlier, each person has a heart where the potential to do good or evil resides. The majority of people under normal circumstances[16] and in the absence of ideologies are 'good people' that do not commit devastating acts of cruelty towards other humans. If the individual is a believer in an ideology however, he may feel morally justified in performing cruelty against non-believers (infidels, traitors, enemies etc.) for he feels that he is protecting something of higher value and views the non-believers as a threat. Thus with the presence of ideologies, good people can do bad things. When we look at history, it was mainly 'good people' that committed evil. People that felt justified in their actions by their ideologies, which under different circumstances they would only think that the most degenerate of people would do. We see now with this analysis that an evil act consists of two things, first an evil act, and second the justification given by the committer of the evil act. As of today our moral systems have only focused on evil acts themselves and classifying them by degree of seriousness, examining them in detail etc. And we tend to look to the committer's life experience and personal history in order to see what has led him to perform such an act? But Hatcher suggest that "if our current analysis is correct, we should begin to focus rather on the socially diffuse values systems- the prevalent and often unstated ideologies- which allow individuals to justify their cruelty."[23] In the closing remarks of Hatcher's chapter he alludes to the fact that we still have ideologies current in our society today "indeed most of us justify our daily injustices to each other with reference to one or another (usually unstated) ideology. Obtaining a clear perspective on these strategies of inauthenticity is the first step towards self-responsibility and moral autonomy."[23] However I have not been able to find his analysis that was to follow this chapter when discussing today's ideologies. William S. Hatcher passed away in 2005.

Why all this is important for innovators?

I realize that the examples that Hatcher has used refers to rather extreme historical events such as the Crusades and world war I and II, and for some it may be hard to connect the dots for why this is relevant for innovators. However if we apply this analysis of powerseeking to our day-to-day value judgments, we may be surprised to see how much evil we inflict upon others based on an unconscious ideology. This

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[16] We are not talking about cruelty under duress for example.

ideology is, as Hatcher observed, 'usually unstated' but nonetheless causes good people to do bad things. Ultimately it is this issue that is what is destructive to society, and on a smaller scale, destructive for innovative climates.

I do not claim that I have the ability to define the 'unstated' ideology that we believe in and would require more study and help from others to be able to define it more precisely. However, I do believe if such an ideology was to be defined, an aspect of it would have to include: that we as a society have created an ideology that legitimizes us to perform acts of cruelty (however they may not involve physical cruelty, but more psychological cruelty) in order for us to raise above others (with external power) in an unconscious attempt to attain happiness. We push each other down, either subtly or not so subtly, in order to get a good grade, get more social status, get money or market share, get the girl; whatever the individual goal may be, and in the process we forget the value supremacy of the human being. We end up making bad value judgments that result in eventually inflicting unhappiness on others and ourselves. By not having a clear understanding of the value supremacy of the human being causes us to loose track of how we should make our value judgments, which often results in sacrificing ends for means and thus acting immorally.

Throughout our day-to-day lives we have to make value judgments constantly. We have to choose to help the old lady off the bus or not, pick up the trash outside our front door or not, apologize to our colleague for the mistake we made or not, help our friends with their homework or not. In the case of innovating teams we have the choice help each other and give encouragement, or not. If one is in a team, but is getting no help and encouragement from the other members in the team, one will eventually become burnt out and feel betrayed. Which is not conducive for the necessary prerequisites for having a good innovative climate.

How often have we declined to help, and said that we didn't have time to help him? But in truth, if we would have reorganized our schedule we could have actually fit him in? Maybe in between our unconscious scrolling of online Newspapers, not watching that TV program that night or reduced time spent on Facebook? Or in other situations like when we didn't raise our hands when somebody asked if there was anybody that could take of the responsibility for their position while they were out of town? Deep within ourselves, we know we could handle the extra workload but instead of offering to help, we remain silent and suddenly stare at the floor and justify our 'not being able to help' on some assignment that we are currently working on that is really important, or words of that effect. In other words we create an ideology in our head, a thought, an ideal or system of ideas about not having time, money, energy, whatever it may be. And suddenly in that situation, value that thought or idea over

the value of the human being that is right in front of us asking for help, when in fact we could. If were willing to give a little[17].

One of the most visible ways to see if we have actually understood the value supremacy of the human being, and are not living a life based on unstated ideologies is if in fact we express altruistic love and offer selfless service in our relationships. Which, interestingly enough, is the same principle that Adam Grant says is what is the main factor that underlies effective and positive cooperate cultures that we talked about in the beginning.

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[17] This is of course relatively true, for instance we cannot help every single beggar on the street in Kolkata. But what we can do is value the beggar more than the most precious and beautiful idea we have. And based on that understanding weigh our decisions of how we conduct our day-to-day actions. If enough people have this understanding, then through our actions we could create a system that extinguished extreme poverty.

REFERENCES

[1]   FUNDAEC, "A Discourse on Social Action," 2006.

[2]   J. Davis. (2013, 10.15.2013) How a Radical New Teaching Method Could Unleash a Generation of Geniuses. *Wired* [Education].

[3]   M. A. West and J. L. Farr, *Innovation and creativity at work: Psychological and organizational strategies*: John Wiley & Sons, 1990.

[4]   J. Tidd and J. Bessant, *Managing innovation: integrating technological, market and organizational change*: Wiley. com, 2009.

[5]   R. Gibson and B. Kelly, "Stoking Your Innovation Bonfire–a Roadmap to a Sustainable Culture as Ingenuity and Purpose," ed: Wiley & Sons Inc, Hoboken, NJ, 2010.

[6]   R. Rosenfeld and J. C. Servo, *Facilitating innovation in large organizations*: John Wiley & Sons, 1990.

[7]   J. Lehrer, "How to be creative," *Wall Street Journal,* pp. 10-11, 12th March 2012.

[8]   P. Koen, G. Ajamian, R. Burkart, A. Clamen, J. Davidson, R. D'Amore, *et al.*, "Providing clarity and a common language to the" fuzzy front end"," *Research-Technology Management,* vol. 44, pp. 46-55, 2001.

[9]   R. Payne, *The effectiveness of research teams: A review* vol. 169: Manchester Business School, 1988.

[10]   R. G. Cooper, "The invisible success factors in product innovation," *Journal of product innovation management,* vol. 16, pp. 115-133, 1999.

[11]   S. Kaplan, "10 reasons why companies fail at business model innovation," ed: The Guardian 2013

[12]   L. J. Leifer and M. Steinert, "Dancing with ambiguity: Causality behavior, design thinking, and triple-loop-learning," *Information, Knowledge, Systems Management,* vol. 10, pp. 151-173, 2011.

[13]   R. M. Burnside, "Improving corporate climates for creativity," *Innovation and creativity at work,* vol. 265, p. 284, 1990.

[14]   A. Grant, "Givers take all: the Hidden dimension of corporate culture," *McKindsey Quarterly,* 2013.

[15]   T. A. Institute, *Leadership and Self-Deception, Getting out of the Box*: Magna Publishing CO. LTD., 2002.

[16]   T. A. Institute, *The Anatomy of PEACE*: Penguin Books, 2006.

[17]   P. S. Bair, *Energize Your Heart In Four Dimensions*: Living Heart Media, 2007.

[18]   R. McCraty, M. Atkinson, and D. Tomasino, "Science of the heart: Exploring the role of the heart in human performance," *HeartMath Research Center, Institute of Heart-Math, Boulder Creek, CA, Publication,* 2001.

[19]   R. McCraty, M. Atkinson, D. Tomasino, and R. T. Bradley, "The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order," *Integral Review,* vol. 5, pp. 10-115, 2009.

[20]   R. McCraty and D. Childre, "Coherence: bridging personal, social, and global health," *Altern Ther Health Med,* vol. 16, pp. 10-24, 2010.

[21]   D. R. Larsen, Buss & A. Wismeijer, *Personality Psychology*: McGraw-Hill Higher Education, 2013.

[22]   R. Gaur, R. Sangal, and G. Bagaria, *A Foundation Course in Human Values and Professionals Ethics*: Excel Books India, 2010.

[23]   W. S. Hatcher, "Powerseeking and Ideology," *William S. Hatcher Library* http://william.hatcher.org/, 2008.
[24]   J. O'Dea, *Creative Stress*: Pioneer Imprints 2010.
[25]   P. R. S. S. G. B. Prof. R. R. Gaur, "A Report on Implementation of

A Foundation Course in Human Values & Professional Ethics in

Institutions of Technical & Higher Education through January 2013," 2013.
[26]   W. S. Hatcher, "Human Values," *The William S. Hatcher Library* http://william.hatcher.org/, 2008.
[27]   W. S. Hatcher, "Fear of Teaching, a meditatoin on the authenticity in human relationships," *The William S. Hatcher Library*.