

The Motivation Paradox: Why Is a Carrot-and-Stick Approach Contra-productive

Igor Petrikovic

Bachelor Thesis
2013



Tomas Bata University in Zlín
Faculty of Humanities

Tomas Bata University in Zlín
Faculty of Humanities
Department of English and American Studies
Academic Year: 2012/2013

BACHELOR'S THESIS ASSIGNMENT

(PROJECT, ARTWORK, ARTISTIC PERFORMANCE)

Degree, First Name and Surname: **Igor PETRIKOVIČ**
Personal Code: **H10817**
Degree Programme: **B7310 Philology**
Degree Course: **English for Business Administration**

Thesis Topic: **The Motivation Paradox: Why Is a Carrot-and-Stick Approach Contraproductive**

Thesis Guidelines:

Study of specialized literature
Collection of research material
Formulation of hypothesis
Analysis of the material and testing of the hypothesis
Practical implications, discussion of the results and conclusion

Thesis Extent:

Appendices:

Form of Thesis Elaboration: printed/electronic

Bibliography:

Kohn, Alfie. Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes. Boston: Houghton Mifflin, 1999.

Motivating Today's Workforce: The Future of Incentive Program Design. The IRF. Incentive Research Foundation. St. Louis, MO. Accessed: 24 Nov. 2012 <http://theirf.org>.

Pink, Daniel. A Whole New Mind: Why Right-Brainers Will Rule The Future. New York: Riverhead Books, 2006.

Pink, Daniel. Drive: The Surprising Truth about What Motivates Us. New York: Riverhead Books, 2009.

Towers, David. An Investigation into whether Organisational Culture is Directly Linked to Motivation and Performance through Looking at Google Inc. Birmingham: The University of Birmingham. Accessed: 26 Nov. 2012, <http://www.towers.fr>.

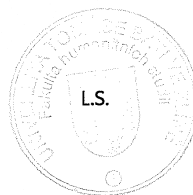
Thesis Supervisor: Mgr. Jana Vondřejcová

Date Assigned: 30 November 2012

Thesis Due: 3 May 2013

Zlín, 30 January 2013


doc. Ing. Aněžka Lengalová, Ph.D.
Dean




PhDr. Katarína Nemčoková, Ph.D.
Head of Department

Bachelor Thesis Author Statement

I hereby acknowledge that:

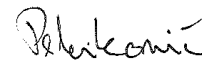
- Upon final submission of my Thesis, I agree with its publishing in accordance with Act No. 111/1998 Coll., on Higher Education Institutions and on Amendment and Supplement to Some Other Acts, (The Higher Education Act), without regard to the defence result;
- I approve of the release of my Bachelor Thesis in electronic form on the university information system, accessible for reading only;
- To my Bachelor Thesis fully applies Act No. 121/2000 Coll., on Author Proprietary Rights, as well as the Modification and Amendment of Other Acts (Author Proprietary Rights Act), connected to author's proprietary rights and their changes in later versions of legal directives, esp. Section 35 Para 3;
- In accordance with Section 60 Para 1 of the Author Proprietary Rights Act, TBU in Zlín is entitled to enter into a licence agreement about the use of the Thesis to the extent defined in Section 12 Para 4 of the Author Proprietary Rights Act;
- In accordance with Section 60 Para 2 and 3, I can use my Bachelor Thesis, or render the licence to its use, only with the prior expressed written agreement of TBU in Zlín, which is in such case entitled to require from me appropriate financial compensation to cover the cost of creating the Bachelor Thesis (up to the total sum);
- If the software provided by TBU or other entities was used only for study and research (non-commercial) purposes in the development of the Bachelor Thesis, it is not possible to use the Bachelor Thesis commercially.

I herewith declare that:

- The contents of the file handed over are identical with the printed copies;
- I have created this Bachelor Thesis on my own and cited all used sources. In case the results are published, I shall be cited as author.

In Zlín 3.5.2013

date



signature

Note: Relevant Czech legislation applied.

ABSTRAKT

Bakalárska práca sa zaoberá problémami systému motivácie založenej na odmene a treste. V práci poukazujem na výskum a experimenty rôznych psychológov, ekonómov a iných humanistických vedcov za cieľom podloženia argumentov podporujúcich teóriu negatívnych vplyvov vonkajších podnetov na vnútornú motiváciu a kreativitu. Zmysel práce spočíva vo zvýšení povedomia o týchto problémoch, pretože sa zdá že podrývajú základnú podstatu zaužívaných motivačných princípov v biznise, školstve a každodennom živote.

Kľúčové slová: vnútorná motivácia, vonkajšia motivácia, cukor a bič, heuristické úlohy, algoritmické úlohy, kreativita, finančné odmeny, odmeny “ak-tak potom”

ABSTRACT

The Bachelor thesis deals with the issues of motivation system based on rewards and punishments. In the thesis, I refer to research and experiments of various psychologists, economists and other social scientists in order to back up the arguments in favor of the theory of negative effects of extrinsic incentives on intrinsic motivation and creativity. The goal of the thesis is to increase awareness about these issues because they seem to undermine the fundamental foundation of motivation principles exerted in business, education and everyday life.

Keywords: intrinsic motivation, extrinsic motivation, carrot-and-stick approach, heuristic tasks, algorithmic tasks, creativity, financial incentives, “if-then” rewards

ACKNOWLEDGEMENTS

First of all I would like to sincerely thank my supervisor Mgr. Jana Vondřejcová for her support, patience and for providing me with a dose of optimism every time we met.

Secondly, I would like to thank everybody who have contributed to the birth of the idea of this thesis, because it helps to get an insight in the elements essential for leading more productive and meaningful life.

Most importantly I would like to thank my family and friends, especially my parents for providing me with psychological and financial support during my studies.

CONTENTS

INTRODUCTION	8
1. THE FIRST EXPERIMENTS	10
1.1 HARRY HARLOW'S PUZZLE	10
1.2 EDWARD DECI'S EXPERIMENT	11
1.3 THE CANDLE PROBLEM	13
2. THE SIX REASONS	16
2.1 INTRINSIC MOTIVATION.....	16
2.2 PERFORMANCE.....	17
2.3 CREATIVITY	18
2.4 ALTRUISTIC BEHAVIOR.....	20
2.5 CHEATING AND UNETHICAL BEHAVIOR	21
2.6 ADDICTION	23
3. THE SITUATIONS WHEN CARROTS AND STICKS WORK	25
3.1 ALGORITHMIC TASKS	25
3.2 HEURISTIC TASKS.....	25
4. THE THREE ELEMENTS.....	29
4.1 AUTONOMY	29
4.2 MASTERY	31
4.3 PURPOSE.....	33
CONCLUSION	37
BIBLIOGRAPHY.....	39
LIST OF PICTURES	41

INTRODUCTION

Dating back to my high school studies at grammar school in Piešťany, I have always felt a bit fed up with the subjects which were taught by the infamous style of pointless memorizing of information. The only motivation which most of the students had to study these subjects in this manner, including me, was the motivation to get the grade. I have always somehow done better in the subjects, which were taught by the professors, who knew how to be inspiring and did not miss the opportunity to explain the purpose or useful implications of the stuff we were learning about. Believe or not, there were subjects I have enjoyed to sit through, mostly social sciences and languages like philosophy and English. Usually they were taught by interesting professors, who always knew how to motivate with purpose and were very well in communicating their thoughts. In contrast, there were the professors, whom teaching methods were not so interesting, moreover their methods of motivating students by promising them a good grade, or threatening them with a bad one in order to get better results in my opinion never seemed to work very well. However, I am not saying, that professors should take the full responsibility for how the students are performing, I am just trying to emphasize, that their approach can be very influential. I am sure many people can relate. My point is, that intrinsic motivation, in my opinion can be encouraged under the right circumstances.

While looking for a topic for my bachelor thesis I have discovered this topic, which appeared to be quite consistent with my previous thoughts. However, as I have found out, the issue of motivation based on the carrots-and-sticks or “if-then” approach, which is so deeply rooted in our business, education and everyday life seems to be much more intriguing and serious. More and more studies done over the last sixty years in field of behavioral psychology, economy and other humanistic fields are starting to suggest, that the motivation based on extrinsic incentives, which most of us thinks works just fine, not only does not work as we would wish, but often does harm. Moreover the extent of this issue seems to have a bigger scale than one would think, concerning the various field of study to which it does reach.

The goal of this thesis is to explain why the carrot-and-stick approach in many cases does not increase productivity. Advert the evidence found by various researchers in order to back up the arguments in favor of this hypothesis. Provide the reasons, why the motivation system based on rewards and punishment does not work accordingly. Point out the negative effects it has on our behavior. Mention the special occasions, when “if-then”

external incentives work. And finally to provide an insight into the elements and motivation system we should try to encourage in order to increase productivity, utilize our time more meaningfully and promote better overall well-being.

In the first chapter I will describe the first experiments, which were happened to be the foundation of the idea, that extrinsic incentives can have harmful effects on intrinsic motivation, productivity and creativity.

In the second chapter, I will try to explain, the reasons, why the carrot-and-stick approach does not work, which are undermining on intrinsic motivation, negative effect on productivity, discouragement of creative thinking, prevention of altruistic behavior, promotion of cheating and unethical behavior and addiction.

In the third chapter I will try to point out the situations when carrots and sticks does come into consideration, based on the distinction between algorithmic and heuristic tasks.

And finally in the fourth chapter I will present the three key elements on which the motivation based on intrinsic motives can be encouraged in order to increase productivity, employee engagement and overall satisfaction. These three key elements are autonomy, mastery and purpose.

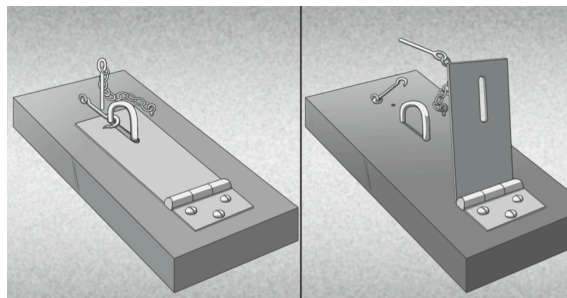
The main idea comes from Daniel Pink's book "Drive: The surprising truth about what motivates us." I have found my way to this topic through his TED talk on youtube, and then I have read his book. Turned out it is just one of the many books about this issue, but I have found his division of the topics the most practical. I will therefore use the division of topics similar to his and enrich these topics from the sources I have found over my research and also with my personal insights.

1 THE FIRST EXPERIMENTS

In this chapter I will introduce you to the first experiments focused on the effects of external rewards on intrinsic motivation and creativity conducted by Harry Harlow, Edward Deci and Sam Glucksberg.

1.1 Harry Harlow's Puzzle

To make a case, let me introduce an experiment of Canadian professor of psychology of University of Wisconsin, Harry Harlow, who in the 1940's built one of the first laboratories oriented on the study of the behavior of primates. In 1949, he conducted a series of experiments with *makak rhesus* type of monkeys to better understand how we learn. (Pink, 2009, 2-3) He and his colleagues designed an easy puzzle, which you can see on the picture below.



The solution of the puzzle is to pull out the straw, dislocate the hook and finally move the steel platform. They placed the puzzle in the cage with the monkeys and while the first observations an interesting thing happened. Monkeys started to play with the puzzle in order to find out how it works without any compulsion. They even seemed to enjoy the task. After 10 to 15 days, the tested monkeys were solving the puzzle quite easily. It was in conflict with the notion of how primates behave, even those with bigger brain. (Harlow, 1950, 231)

In that time, mainstream science recognized two types of motivation. The first one was biological need. People and other living creatures have the drive to eat in order to urge hunger, drink in order to satisfy the feeling of thirst and have sex in order to comfort the seminal needs.

Nevertheless, this was not the case. "Solving of the puzzle did not lead to food, water or sexual satisfaction," Harlow summarized. (Harlow, 1950, 231) Moreover, the behavior of the monkeys could not have had been explained by the second driving force either. The

motivation based on the rewards and punishments from ones environment for a certain type of behavior. “If you promise me a higher salary and longer vacation I will work more. If you threaten me that I will lose my job, if I come to work late, I will be on time every single day.” (Pink, 2009, 1-2) This theory also could not explain the behavior of the monkeys. As a result Harlow has described a new kind of motivation, *the intrinsic reward*. Primates were solving the puzzle, because they simply wanted to understand how the machine works, and had joy from dealing with the challenge.

Harlow presumed, that the first two motivations had to be superior to this new kind. Imagine adding a reward to experiment for every successful solution. Logically, we could assume, that the monkeys will do even better. The surprising truth was, that when the food reward was added, monkeys started to do more mistakes and were less successful. Well, this just makes no sense, right? This was something really unusual and other experiments were indicating the same results. It was a phenomenon, which has not been described in any book before. (Pink, 2009, 3)

These findings were fundamentally undermining the known notion about motivation. Harlow was alarming the scholars, that our knowledge and explanations of why we do, what we do, are incomplete. After some time, for some reason he flinched from this idea, but other researchers had continued to work with it.

1.2 Edward Deci’s Experiment

One of the other researchers, who kept this idea live, was Edward Deci, who was in 1969, as a student of post-gradual studies of psychology at Carneige Mellon University, looking for a topic for his thesis. He discovered a study of professor Harlow and it had just confirmed his notion, that there seemed to be a misconception by the scholars and businessmen concerning the understanding of motivation. (Pink, 2009, 4)

For his experiment he has chosen a Soma puzzle, which was assembled from cubes and at that time it was a favorite toy by Parker Brothers. The puzzle consists of seven different polycubes. The polycubes are little blocks of dices constructed from four 2cm dices or three 2cm dices. One can construct several million combinations from this puzzle, from abstract creations to recognizable items. (Hein, 1998)

For this experiment Deci gathered university students and divided them to two groups, without them knowing of each another. We can call them group A and group B. Every student has participated at three one-hour sessions in three days, where they were supposed to construct the given combinations of the puzzle.

At the every desk there was seven pieces of a soma puzzle, New York Times magazine and Playboy. Deci was sitting in front of the class to give instructions. After half an hour he suggested a break. He told the students, that he needs to input the data to a computer and according to them choose another picture of the puzzle to be constructed, which at that time, with computers occupying whole rooms could take quite some time. He told them, that he will be back in a while and they can do whatever they want. However, he did not go to prepare the picture, but he went to another room, which was connected to the classroom with a window through which you can see just from one side and observed how the students were behaving. (Pink, 2009, 6)

It is not surprising, that at the first session there was not a big difference in what the students were doing in this free time. In both groups students continued playing with the puzzle 3.5 to 4 minutes in average, from what we can tell, the puzzle got them quite interested.

The next day, on the second session the process was the same, only Deci told the students of the group A, they will get a dollar for every right solution, (today, it would be around 7 dollars). The group B was not offered the money. While the break, the awarded group kept playing with the puzzle more than 5 minutes in average, presumably hoping, they will get ahead and it will help them to solve the next one and receive the reward. This quite agrees with the notion, what we think about the motivation, right? More rewards mean better performance.

What happened the third day only confirmed Deci's suspicion. This time Deci told the students of the A group, that he have had just the right amount of money to pay them only for the day before, and that this third session will not be paid. Then the events went the same and Deci continued in his observations. While the break, the group B played with the puzzle a little bit longer than the two sessions before, maybe it engaged them more, or it was just a statistic drift. The group A, however, in the 8 minutes of the free time was acting differently. The students spent in average less than 2 minutes playing with the puzzle then previous sessions. The students were showing a decrease of interest in the task caused by the abundance of the reward. Previously a playful challenge now seemed more like a work to them. (Deci, 1971, 114)

In reference to Harlow's research from 20 years before that time, Deci revealed, that the rules of motivation are in a disagreement with what most of the scholars and ordinary people believe. The rewards can embrace a short-term gain, but in the long run, especially

dealing with heuristic tasks, they often not only do not work, but also diminish long-term, intrinsic motivation. (Pink, 2009, 6-8)

1.3 The Candle Problem

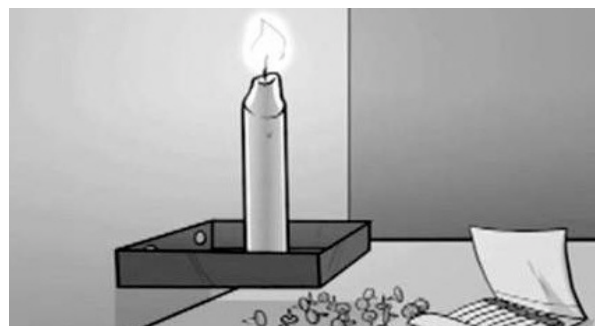
Another scientist, who continued to research this intriguing matter, was Sam Glucksberg. He has done an experiment with the candle problem, which approaches the problem from the perspective of creativity.



The experiment was based on solving of the puzzle designed by a German psychologist Karl Duncker in 1954, which you can see on the picture above. You get a candle, a box of pins and matches. The goal is to attach the candle to the wall, so the wax does not drip on the table.

Glucksberg divided his participants in two groups. To the first group he has told, that he will measure their time and performance in order to make statistics. To the second group he promised a financial reward of five dollars, if the participant will be in the 25% of the fastest times and 20 dollars to the fastest participant of all. (Pink, 2009, 26)

Most of the people try to pin the candle to the wall, or melt the side of the candle and attach it to the wall, what simply does not work. Here is the solution of the candle problem:

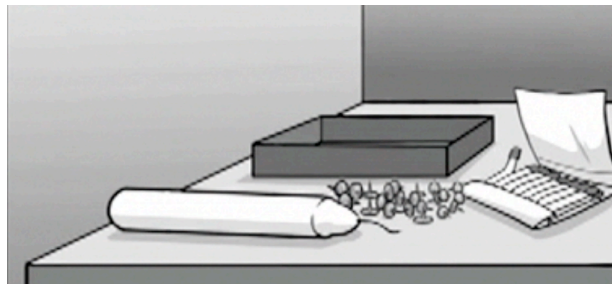


The trick is to use the pin box as a platform for the candle. In order to solve the puzzle, you need to overcome the functional fixedness and see the box not only as a case for the

pins, but also a platform on which the candle can stand. We can quite eloquently say, that, to solve the puzzle, you need to engage your “out-of-the-box” thinking.

Most of the people get the right solution after 3 to 5 minutes in average. The question of course is, which group had done a better job. Surprisingly, to solve the puzzle, it took the rewarded group about 3 minutes longer in average. (Glucksberg, 1962, 36-41) For many people it is firstly intriguing to think about, because you have the design, which should sharpen the thinking and embrace the creativity and it does just the opposite. We need to keep in mind, that this and other experiments were done over and over for over forty years, what means this result was not a random coincidence. The results of scientific research keep showing us the same thing. That something is not quite right about our perception of human motivation.

Let me introduce an easy version of the candle problem:



When researchers conducted the experiment with this version of the puzzle, the rewarded group has shown faster times than the unrewarded one. With the pins outside the box the participants has come to the solution much quicker. The extrinsic rewards, seems to work, when there is a linear way to a solution. When, of course, more deep and creative thinking is needed, the rewards seem to do harm.

Now, how is this possible? The rewards should enhance the performance, but they do just the opposite. To understand this problem better, we need to find out when exactly it occurs. To get a handle of it, there is a need to distinguish between the tasks we face every day in school, work and everyday life. We can distinguish between the algorithmic tasks and heuristic tasks. Algorithmic tasks are tasks, which follow a set of established rules down to a pathway to conclusion. Doing bookkeeping, making reservations, sorting out documents etc. Heuristic tasks are more complex and involve creative thinking. The solution to these tasks is not clear at first sight, we need to think deeply in order to find out

the solution. Working on heuristic, in contrast with algorithmic tasks, also involves doing something new frequently.

The carrot-and-stick approach or “when you do this, you will get this”, or even better “if you don’t do this, this will happen to you” approach seems to work for the algorithmic tasks. However, while dealing with more complex, creative tasks, that require loads of thinking, the rewards and punishments not only seem to do a bad job, but they often do harm.

In our society and management there is a notion, that if the company will pay the employee more, offer him or her a longer vacation, service car, or all kinds of other extrinsic incentives, he, or she will do a better job and that person’s performance and engagement will increase. The surprising truth, which science shows us is, that reward narrows our focus on the reward itself and blocks the creative thinking what has an undesirable outcome, yet still most of our businesses and institutions are built around this system.

We could ask a question. Why do we need to focus on the heuristic tasks? Simply, because, we live in a 21st century and the algorithmic or routine tasks can be more and more easily done by computers, or cheaply outsourced. In fact, in USA only 30% of job growth comes from algorithmic work, while 70% comes from heuristic work. The future lies in the right-brained thinking. The solutions to our most important problems do not lie in front of our nose but in periphery. (Pink, 2009, 29)

2 THE SIX REASONS

Daniel Pink in his book *Drive: The Surprising Truth about What Motivates Us* provides six major reasons why carrot-and-stick approach often does not work. I will refer to some terms from this book. He calls the motivation based on biological needs the *motivation 1.0*, the if-then motivation, *motivation 2.0*, and the intrinsic reward the *motivation 3.0*. According to him, the motivation 3.0 is an upgrade we need to enforce in our businesses, schools and homes in order to increase performance, utilize our time more meaningfully and promote better overall well-being. The outcome of the research of many psychologists, economists and other scientists is quite compelling evidence, that rewards can extinguish intrinsic motivation, diminish performance, crush creativity, crowd out good behavior, encourage cheating, shortcuts and unethical behavior, become addictive and foster short-term thinking.

Before I will explain the reasons, let me introduce a practical joke of how rewards can transform a child's play to work. An example from Alfie Kohn's book *Punished by Rewards* provides an insight to a problem of an elderly man being harassed by young rascals. After a couple of times of taking the insults, he finally devises a scheme. He offers a dollar to each one of them if they will come the next day and yell their insults again. They return zealously, insult the old man and receive their money. He tells them, that he can pay them only 25 cents the next day. They return a little bit of less enthusiastically and do what they are told to in order to receive the 25 cents. Finally the old man tells them, the next day's rate would be just a penny. "Forget it," they say and never harass him again. (Kohn, 1993, 56) This principle illustrates, that rewards can lead to intriguing kinds of changes in human behavior.

2.1 Intrinsic Motivation

The result of one of the researches conducted in 1978 by behavioristic scientists Mark Lepper, David Greene and Robert Nisbett has become a classic argument in favor of the theory, that rewards can diminish intrinsic motivation. For their experiment they gathered three groups of kindergarteners, which gladly spent some of their free time by drawing. They wanted to see what would happen if they offered them rewards for the activity, they obviously enjoyed. On the day of the experiment, the teacher came to the class and when their free time started, she asked them if they want to draw something. She continued with those who said yes. To each child in the first group the teacher offered a diploma with the blue band and their name. To the second group, the teacher did not promise a diploma, but

the children got one unexpectedly after their work was done. To the third group, the diploma was not promised, and they did not get one after the drawing session. Two weeks after the experiment, in the same classes teachers has given children papers and pencils, while the researchers observed them secretly. The children from the third group, who was not expecting a reward, and were not rewarded, were drawing with the same enthusiasm as before the experiment. The children from the first group, however were showing much less interest and spent less time drawing. The effect of the diplomas was visible even two weeks after the experiment. The rewards seemed to have a minimal effect on the intrinsic motivation of the children from the second group, who did not expect the reward, but got it afterwards. The results have shown, that just conditional, or “if-then” incentives had a negative effect. According to the researchers it is because this type of reward system require from the people to give up a part of their autonomy. (Lepper, Greene, Nisbett, 1973, 129-137) They conducted the experiment multiple times, and later other researches has done the same with the adults, showing similar results, that extrinsic rewards seem to have a negative effect on intrinsic motivation.

If we think about it, these findings are challenging a common knowledge practiced by most of the companies and schools. Their findings were turned out to be so controversial, that in 1999, Deci with two colleges decided to reanalyze almost 30 years of study in this field to accredit these findings. “Careful consideration of reward effects reported in 128 experiments lead to the conclusion, that tangible rewards tend to have substantially negative effect on intrinsic motivation,” they concluded. (Deci, Ryan, Koestner, 1999, 659) “When institutions – families, schools, businesses, and athletic teams - for example, focus on the short-term and object for controlling people’s behavior, they do considerable long-term damage”. (Deci, Ryan, Koestner, 1999, 659) Dan Pink has provided these examples, “Try to encourage a kid to learn math by paying her for each work-book page she completes – and she’ll almost certainly become more diligent in the short term and lose interest in math in the long run. Take an industrial designer who loves his work and try to get him to do better by making his pay contingent on a hit product – and he’ll almost certainly work like a maniac in short term, but become less interested in his job in the long term.” (Pink, 2009, p. 39)

2.2 Performance

The testing of financial rewards on performance can be quite an expensive challenge for the researches, that’s why four economists led by Dan Ariely decided to form their

research center in Madurai, India, where the economic standards are lower, than in western countries.

These economists gathered a group of 87 participants and asked them to deal with various tasks including solving anagrams, memorizing sets of numbers and other activities, which needed an engagement of creativity and concentration in order to be solved. The participants were divided in three groups, while each group was rewarded by a different amount of financial incentives. To the first group the researchers offered 4 rupees for the right solution of the tasks, which at that time was approximately 50 US cents and it was an average daily salary in Madurai. To the second group, they offered a medium reward, 40 rupees, approximately 5 US dollars. The third group was offered 400 rupees, approximately 50 US dollars, or an equivalent of five months salary. (Pink, 2009, 40-41)

What were the results of the research? Was there a correlation between the amount of pay and the levels of performance? There was, but not the one you would normally expect. The results have shown, that the medium-rewarded group did not have better results, than the least-rewarded one. The surprising truth is, that the third group had the worst results from all. In almost every measuring they had worse results than the subjects from the less-rewarded groups. As was stated in the report of results of the experiments, “In eight of the nine tasks were examined across the three experiments, higher incentives led to worse performance.” (Ariely, Gneezy, Lowenstein, Mazar, 2005, 5-11) This research was done for the Federal Reserve System, which is one of the most powerful economic representatives in the world. The research, instead of confirming an easy economical principle, fully contradicts it.

Other researches from London School of Economics, has in 2009 analyzed fifty-one studies of business plans of paying the employees to increase performance. Their conclusion was that, “We found out, that financial incentives can result in a negative impact on overall performance.” (LSE, 2009)

2.3 Creativity

More and more studies seem to indicate, that external incentives can have an undesirable effect on our creative thinking. If we are promised a financial reward as a price for completing a heuristic task, unexpected things seem to happen.

This issue can be eloquently illustrated by the candle problem experiment. The results of Sam Glucksberg’s experiment with candle problem, which I have mentioned earlier, shows us that, financial incentives usually drags the focus from the task itself to the

reward, which has the outcome of blocking the creative thinking and therefore diminishing performance.

It looks like something similar is happening while not dealing with solving of existing problems, but creating something new. Teresa Amabile, professor of Harvard Business School, and one of the leading researchers in the field of motivation tested the effects of financial incentives on the creative process. In one study, she, with two colleagues, gathered a group of twenty-two professional artists from United States. They were asked to pick ten pieces of their work, which was ordered by a customer and ten pieces of work they have created for themselves. Amabile then presented the works to a group of great curators and connoisseurs, so they could evaluate the works in terms of creativity and technical approach, without them knowing of being part of an experiment. (Pink, 2009, 45-46) “Our results were quite startling,” she wrote. “The commissioned works were rated as significantly less creative than the non-commissioned works, yet they were not rated as different in technical quality. Moreover, the artists reported feeling significantly more constrained when doing commissioned works than when doing non-commissioned works.” One of the artists described the effect as follows, “Not always, but a lot of time, when you are doing a piece for someone else it becomes more “work” than joy. When I work for myself there is the pure joy of creating and I can work through the night and not even know it. On a commissioned piece you have to check yourself, be careful to do what the client wants.” (Amabile, Phillips, Collins, 1993, 273-274)

Another study observed artists in long-term perspective. The results indicate, that worrying about the external incentives can have a negative effect on one’s success. The researchers have done a survey with second and third-graders at School of the Art Institute in Chicago in the 60’s about their attitude towards the work, and if they were motivated more intrinsically or extrinsically. Another researcher, twenty years after the research, used the data and investigated the current position of the students who have meanwhile become the working adults. The findings shows the following, especially concerning males, “The less evidence of extrinsic motivation during art school studies was found, the more successful the students have become in professional art both several years after graduation and nearly twenty years later.” (Carney 1986) Artists who have shown less reward-oriented behavior and more intrinsic engagement were more successful. They came through some hard times concerning criticism, which follows almost every artistic career and yet still, stayed persistent in their work, which has later been recognized as astonishing. The study

summarizes the result by the following sentence, “It is those who are least motivated to pursue extrinsic rewards who eventually receive them.” (Carney 1986)

We need to keep in mind that this result does not apply to every task. Carrot-and-stick approach may work with routine tasks, which depend on certain already existing rules, which leads to a logical solution. Nevertheless, rewards do not seem to have a positive aspect on dealing with more complex problems, which require flexible solutions, inventiveness and conceptual understanding. Many suggest, that this is one of the most robust and ignored findings in social science. “For artists, scientists, inventors, schoolchildren, and the rest of us, intrinsic motivation – the drive to do something because it is interesting, challenging, and absorbing – is essential for high levels of creativity. But “if-then” motivators stir creative thinking.” (Pink, 2009, 46)

2.4 Altruistic Behavior

The other effect that financial incentives seem to trigger is crowding out of altruistic behavior. The idea comes from the research of British sociologist Richard Timmus. In 1970 he has written a book *The Gift Relationship*, in which he has examined the system and consequences of blood donation. His argument was, that monetary rewards for donations might decrease the supply of blood donors for the United Kingdom. His opinion was, that the blood donation payments are immoral and also ineffective. Unfortunately his statements were rather hypothetical and he did not conduct any experiments to prove his claims. Moreover this concept seemed absurd to most of the economists. (Pink, 2009, 47)

Luckily enough, about fifteen years later two Swedish economists decided to put this hypothesis to a test. They conducted an experiment with 153 women who were in the decisive process of donating blood. An again, as seems to be a trend in behavioral psychology, they divided the women to the three groups. First group was told, the donation is voluntary, what means they can donate blood and do not receive anything in return. To the second group they told, that for every donation they will receive 50 Swedish crowns, approximately 7 dollars. To the third group they offered an alternative, they will receive the money with an option to donate it to a charity, concretely to the Swedish Children’s Cancer Foundation. From the first group, 52% of the subjects decided to donate blood. They were acting in an altruistic way in order to help their fellow citizens. The theory of motivation 2.0 would logically suggest, that the second group would have a higher percentage of participation. They were already thinking about donating blood, therefore the financial incentive should have a positive effect pro their decision. As you maybe predict,

the participation of the second group dropped to 30%. The financial motivator had a negative effect on participation in this altruistic activity. It seems, that the financial incentives indented the inner desire to do a good thing, after all the essence of donating blood does not lies in the extrinsic rewards, but a good inner feeling from doing a good thing. On the other hand, the participation of a group provided with the alternative of donating the finances to a charity was 53%. The alternative has restored the altruistic purpose of the activity. (Mellstrom, Johannesson, 2008, 845-863)

It is important to say, that this experiment was done also with men. In this case, the results did not show significant fluctuation in participation. The researchers suggest, that it may be because women tend to be more concerned with social esteem than men. These results indicate, that Timmuses hypothesis could be right after all.

This example illustrates, that the rewards are not all wrong at all times. The possibility of donating the money to a charity decreased the negative effect of external incentives. For example, when Italian government decided, that voluntary blood donors will get a free day from work, the blood donations has increased. This principle did not diminish the altruistic purpose. The truth is, that mixing external rewards, with activities, which are in their sense interesting, creative or noble seems to be a dangerous game. The “if-then” rewards in these cases seem to do more damage than good. Delinquency of intrinsic motivation by orientation on rewards seems to limit the possibilities of what one can achieve.

2.5 Cheating and Unethical Behavior

Another reason, why carrots and sticks do not work, according to Dan Pink is, that they encourage cheating and unethical behavior. According to the motivation 2.0, it is rational to assume, that people will take a shortcut to a reward if it is possible. However, between finding a shortcut and desisting a certain obligation in order to receive a reward or accomplish a goal is a thin ice.

The well-known and accepted notion is, that goals work. Academic literature shows, that goals help us to endeavor, work longer and with higher engagement and of course succeed. That is true, however, a group of researchers from Harvard Business School, Northwestern University’s Kellogg School of Management, University of Arizona’s Eller Collage of Management and the University of Pennsylvania’s Wharton School have put this well-known notion in the question. “Rather than being offered as an over-the-counter slave for boosting performance, goal setting should be prescribed selectively, presented with a warning label, and closely monitored,” (Ordonez, Schweitzer, Galinsky, Braverman,

2009) While the goals, which we set for us, by ourselves seem to be a great source of intrinsic motivation, the more complex situation occurs, when the goals are assigned to us by others. For example, the business plan, that we need to adhere given to us by our boss, the results of the standardized test we should achieve in order to get to the best university, the quarter-year sales we need to acquire in order to increase the profit of the company. (Pink, 2009, 50-51)

Extrinsic goals, as well as other extrinsic motivators narrow our focus. That is one of the reasons, why they can be effective, however as we have seen earlier, this phenomenon usually have some additional cost. To demonstrate, we can take a look on couple of examples. The Sears company has imposed the performance bonuses, and the reaction of the employees was increasing the payments of their clients by billing unnecessary reparation services. The Eron Company has set the noble income goals. The aspiration to achieve these goals by any possible measures, have had an outcome of bankruptcy. The resolution of Ford Company to construct a certain car of certain measures to a certain deadline was so eager, that they omitted a security checks and released an unreliable Ford Pinto. (Pink, 2009, p. 51) The problem of external incentive or goal-oriented system seems to be, that many people will choose the quickest path to the reward, even if it would be immoral and they would get the reward for a task that interest them. These are very serious bugs of carrots and sticks. The if-then reward drags the focus from the task even the one you could find interesting and promotes unethical behavior. In my opinion, the majority of our problems today originate from this principle, which is deeply rooted in our society through the monetary system. We can notice the examples almost everywhere, sportsmen take restricted substances in order to achieve performance bonuses, pharmaceutical companies provide more-expensive drugs then necessary in order to increase their profit. There has been may scandals caused by this system, do not even let me start on politics.

If you compare this attitude with the behavior based on the intrinsic motives, if the activity it self is a reward, the deepening of the knowledge, satisfaction of the customers or simply doing the initial good, the existence of shortcuts simply vanishes. The only way to the goal is the way of generosity and the way of trying to achieve perfection. Of course not every goal is created in the same way and not all of them have unpleasant effects on our behavior, but the external goals seems to be more poisonous, than motivation 2.0 concede. Dan Pink with his business school professors suggest that, “Goals may cause systematic problems for organizations due to narrowed focus, unethical behavior, increased risk

taking, decreased cooperation, and decreased intrinsic motivation. Use care when applying goals in your organization.“ (Pink, 2009, p. 52)

The two Israel economists Uri Gneezy and Aldo Rustichini, who in 2000 for two weeks observed a kindergarten in Haif, Israel, can provide another proof, that motivation 3.0 is more surprising and less mechanical than we think. The parents could leave their offsprings in the institution from 7:30 to 16:00. If the parents were late, the teacher had to stay in the work overtime. The researchers observed the kindergarten for over a month in order to find out how many parents come to pick up their children late. Then they put the following note on the door: “Announcement: Fine for coming Late. As you all know, the official closing time of the day care center is 16:00 every day, Since some parents have been coming late, we (with the approval of the Authority for Private Day-Care Centers in Israel) have decided to impose a fine on parents who come late to pick up their children. As of the next Sunday a fine of NS 10* will be charged every time a child is collected after 16:10. This fine will be calculated monthly, it is to be paid together with the regular monthly payment. Sincerely, The manager of the day-care center.”(Pink, 2009, p. 52-53)

The hypothesis of the experiment was, that if certain behavior has negative implications, the financial regulation would lead to certain repercussion and deflation of this kind of behavior. This however, was not the case. “After the introduction of the fine we observed a steady increase in the number of parents coming late. The rate finally settled at a level that was higher, and almost twice as large as initial one”, the researchers wrote. (Gneezy, Rustichini, 2000, 3, 7) Who would consider, that financial punishment of certain activity would support its prosecution? Here we have another little bug of the carrots and sticks. One of the main reasons, why parents came to pick up their children on time was, that that wanted to maintain a certain relationship with the teachers based on solidarity. The addition of the fee for latecomers created the notion, that the parents can buy the extra time. Many of them have omitted the feeling of obligation to act fairly towards the teachers. The experiment, therefore, did not promote the good behavior but stifled it. (Pink, 2009, 53)

2.6 Addiction

“Pay your son to take out the trash – and you’ve pretty much guaranteed the kid will never do it again for free. What’s more, once this initial money buzz tapes off, you’ll likely have to increase the payment to continue compliance.” (Pink, 2009, p. 54) This simple

example illustrates another reason why rewards can have unpleasant effects on one's behavior.

Science shows us, that rewards can be addictive as dangerous drugs. Brian Knutson, the scientist studying the nerve system conducted an experiment for National Institute on Alcohol Abuse and Alcoholism. He used the method of functional magnetic resonance to scan brains of healthy people while playing a game concerning the chance of winning or losing cash. The knowledge of the possibility of winning activated the part of the brain called *nucleus accumbens*, what caused, that this part of the brain has received a dose of dopamine. It did not receive this dose when informed there is a possibility of losing the money. The interesting information for us is, that this basic chemical process happens while addiction. The most addictive drugs work on the same principle. When taken, body sends a dose of dopamine to nucleus accumbens, what causes a short-term gratification, which eventually fades and the body demands of another dose. This implies, that promising rewards can have similar consequences as taking nicotine, cocaine or other addictive drugs. (Knutson, Adams, Fong, Hommer, 2001, 21) Kutson claims, that by activation of nucleus accumbens it is possible to predict accepting decisions, which implies risk or even making mistakes caused by the questing for the risk situations. According to carrots and sticks, which are a basic foundation of most of our institutions today, rewards should motivate people to do better decisions, but in fact, they seem to be rather addictive and promote risky behavior. That is, of course, not a desirable outcome when we are trying to motivate our employees and co-workers.

3 THE SITUATIONS WHEN CARROTS AND STICKS WORK

The carrots and sticks are not all wrong. There are situations in which they do their job well, but they need to be utilized carefully. Everyone needs to get paid for the work they do. In order to even consider the motivation system, first the basics must be achieved. Without a healthy, adequate and fair salary the motivation of any kind is hard to achieve and often impossible to engender. When these basic goals are met, there are situations when additional external incentives may not be contra-productive.

3.1 The Algorithmic Tasks

The studies have confirmed, that the rewards and punishments seem to work accordingly when applied to the algorithmic tasks, routine tasks that are not interesting that much and don't require much of deep thinking. As Edward Deci, Richard Ryan and Richard Koestner explain: "Rewards do not undermine people's intrinsic motivation for dull tasks because there is little or no intrinsic motivation to be undermined." (Deci, Koestner, Ryan, 2001, 14) If we remember the experiment of Daniel Ariely, who with his co-workers conducted an experiment in India where they found out, that when the task require even a little cognitive effort the more financial incentives lead to worse performance, they also concluded, that rewards work as expected with mechanical tasks. (Pink, 2009, 62) This is an important thing to keep in mind.

Almost everybody meets in the work with the algorithmic tasks, filling out the forms, sorting out the documents, replying to boring emails and all kinds of activities, which are simply not the best time of our lives. Moreover, there are people who do this kind of work the whole shifts. In these kinds of situations it is best to try to transform the work to a game, increase the diversity of the tasks or use it to get better in other activities. These are the situations where the carrots and sticks come to the consideration.

Dan Pink provides a practical example of understanding the concept of routine tasks in practice. "Suppose you're a manager at a small nonprofit organization. Your design team created a terrific poster promoting your group's next big event. And now you need to send the poster to twenty thousand members of your organization. Since the costs of outsourcing the job to a professional mailing firm are too steep for your budget, you decide to do the work in-house. Trouble is, the posters came back from the printer much later than you expected and they need to get in the mail this weekend." (Pink, 2009, p. 63)

We need to find the best solution of how to get, lets say, ten of our employees to come to a meeting during the weekend to send these posters. The task itself is a typical

algorithmic task, it requires rolling the poster, putting it to a cardboard tube, closing it and sticking the stamp and address on it.

The first option many managers would probably consider is compulsion. You are the boss, which means you have the authority to oblige people to come to the meeting and deal with the tedious task. They may agree, but the damage you would make on their moral and long-term engagement to the company would be tremendous.

In this case, therefore the if-then reward may be productive. You may offer the team gift-coupons, promise to organize a company party or you can consider a small financial incentive for every mailed poster. Even though these tangible and intangible external rewards can diminish performance concerning creative tasks, in this case it does not play a big role. The carrots can help, because the task would not normally ignite intrinsic motivation anyway. Dan Pink also provides three advices on how this process would be more successful from the managerial point of view. The first is to offer an explanation, why is this task necessary. The tedious task can become more meaningful and acceptable, if it is a part of your company goal. Providing reasons of why is the task important can increase the engagement. The second advice is to admit that the task is boring. This will show a healthy detachment and identification with the co-workers. This will also help to understand, why the additional if-then reward is part of the management of the company. The third advice Dan Pink provides is the encouragement of the autonomy over the control. If you let your employees do the job in their own way, the job will be done better and more quickly. Autonomy is one of the key elements in achieving the intrinsic motivation and motivating working environment. (Pink, 2009, 64-65)

3.2 Heuristic Tasks

The reality we need to accept is, that people whose work consists of heuristic tasks need to get paid as well. Studies show, that it is possible, more complicated though, to incorporate extrinsic incentives in heuristic tasks without creating a flood of damages.

Let's get back to our company example. Imagine the company is planning another event, we have picked a date and place and now our designers need to create a poster, which will allure the most people possible. What should we do first? The posters were sent successfully and the event was a hit. However a next event is coming up and we need our designer team to create a poster, which will allure the most of the people possible. (Pink, 2009, 66) The first thing we should do is to apply the reward scheme, which will not be based on "if-then" concept. Most managers would come to an office and say something

like, “If you create a poster, which will be absolutely stunning and will have even better response than the last one, you will get a 10% bonus check.” This approach is very common in management nowadays, but as the evidence suggests it leads to worse performance. This task is not mechanical and it requires much of creative thinking and this kind of reward proposal is the right way how to stop this thinking process from happening.

Firstly, of course, the basic needs need to be met. Your employees should receive an adequate and fair salary, in comparison with the industrial standards, and also in order to create a pleasant and motivating environment, your employees need to have a certain amount of autonomy over what they do. These, and other aspects will work together in the long run.

Secondly, speaking of additional external rewards as a method of increasing productivity, it is possible, if used carefully as Teresa Amabile propose. We need to be careful, that we do not use them too often. In this case they can become a part of standard, which we do not want to unfold. Therefore, all additional extrinsic motivators should be unexpected and used only when the task is complete. By giving the reward after the task is finished, we decrease the risk of contra-productive effects taking place. “In other words, where “if-then” rewards are a mistake, shift to “now that” rewards.” (Pink, 2009, 66) As Deci and his colleagues explain, “If tangible rewards are given unexpectedly to people after they have finished a task, the rewards are less likely to be experienced as the reason for doing the task and are thus less likely to be detrimental into intrinsic motivation.” (Deci, Ryan, Koestner, 2001, 7)

Teresa Amabile found out, while researching creativity and motivation, that the highest levels of creativity thrives in those people who were receiving the external incentives in a form of bonuses for a concrete work. In this case the financial or other external reward, to some extent, also provides a form of recognition. This strategy helps to decrease the risk of unwelcome rewards effects.

Dan Pink although suggests, that the best we can do, is concerning nontangible rewards for this purpose, if possible. According to him, we can navigate by following rules. Compliments and recognition for a work well done are much less abusive than prizes and money. In fact, as Deci found out, “the positive feedback can have an enhancing effect on intrinsic motivation.” (Deci, Ryan, Koestner, 2001, 11) So when the designers design a great and successful poster, maybe a simple “ Great, the poster is truly stunning, I am sure it will make loads of people consider visiting our event. Thank You.” would be enough. It may seem humble, but it can have tremendously positive effect. Another rule, which we

should take to consideration according to Pink is providing a useful and concrete feedback and information about peoples work. On most of the workplaces people are desperate to find out how are they doing in their work. Providing a useful and productive feedback can have a huge effect on increasing the intrinsic motivation. In the case, when the feedback is constructive and it is not an attempt to control ones behavior. (Pink, 2009, 67) The more is the feedback oriented on concrete aspects of the activity the more positive effect it can have on performance. Fox example say to the designers, “I like the choice of the title font, it works well with the idea of the event,” etc.

To summarize. For the heuristic tasks it is dangerous to motivate people with “if-then” extrinsic rewards, notably with financial incentives. If you are trying to increase the performance through extrinsic incentives, you should consider “now-that” rewards, recognition and useful feedback.

4 THE THREE ELEMENTS

The things we can, and should encourage in companies of 21st century in order to increase productivity and overall employee engagement and intrinsic motivation are autonomy, mastery and purpose.

4.1 Autonomy

According to Pink autonomy is the most essential of these four. Employees in order to achieve the highest levels of engagement need to feel autonomy over what they do how they do it, when they do it, and who they do it with. We need to keep in mind, that this is not universally applicable for every type of job, but I believe it is, for most of the jobs. This thesis is mainly about motivation relating the corporate environment, but it is also applicable to schools and other institutions.

One of the great tools, which can be used to embrace autonomy, is Results-Only-Work-Environment or simply ROWE. This is a strategy, which is not oriented on the amount of time spent at work, but on the results. If we think about it, this is what matters the most for most of the companies and institutions. Positive results are signs, that we are doing the job well, or that we have hired the right people for it.

More and more managers say, that the nine-to-five work schedule is not working well anymore. "I have often stated things as 'I do not care whether you earn \$10.000,- an hour' and people look at me in amazement, because they don't understand. What I mean by this is that I only care about results. If I pay you \$5.000,- because what you give me as a result is worth \$5.000,- to me, does it really matter whether you do that in 30 minutes or 100 hours? No!" (Meijers, 2010) This is a very big culture shift, as the society progress, the more the work environment and demands of people change. Studies show, that the nine-to-five working schedule is not the best for every person. "People will be happier when they can pick up the kids at 3 pm from school, without discussion. And as a result people have more fun in their work and yield a higher productivity." (Meijers, 2010)

This model simply suggests, that employees do not even have to show up at work, if it is not entirely necessary. They just have to get their job done. As Dan Pink suggests if the ROWE model is applied, "The productivity goes up, worker engagement goes up, worker satisfaction goes up and turnover goes down." (Pink, 2009, TED Talk)

We can still embrace autonomy for our workers, even if they have to be at work physically. In Google for example, the workers can 20% of their work time, work on anything they want. Google employees themselves claim, that these 20% of their work time, is the time when the best ideas come from. Over half of their best new products like g-mail have burst into existence during this time. “I love what I do (I work for Google's Partner Solutions Organization, writing internal programs and tools to help better manage our partner relationships), but Google's "20 percent time" recently came in handy. The 20 percent time is a well-known part of our philosophy here, enabling engineers to spend one day a week working on projects that aren't necessarily in our job descriptions. You can use the time to develop something new, or if you see something that's broken, you can use the time to fix it. And this is how I recently worked up a new feature for Google Reader.” (Alex K., 2006) This is an example, which proves, that if you give your employees certain amount of autonomy over what they do, in addition to pleasant working environment and company culture, they will contribute to the company more, than they would without it. It is in human nature to be autonomous and individualistic, however current system of management does not take this into consideration that seriously. Probably because management is about control, and it is more complicated to devise a model based on autonomy, but as we are starting to understand the orientation from control to autonomy is the right way to increase productivity. On the other hand we need to keep in mind, that autonomy does not mean discouragement of accountability. People must be responsible for their work.

To develop an incentive program based on intrinsic motivation is much more complex task than motivation based on carrots and sticks. It requires an extra effort in promoting the contact between the employer and employee on more diverse and personal level. One of the institutions, which is dealing with the engendering the motivation 3.0 in practice by designing various incentive models for different types of companies is the Incentive Research Foundation. They have summarized the current situation by following words, “What is clear from our research, including the opinions of the great majority of our experts, is that incentive, reward and recognition programs must be more tailored today than in the past. Careful design must make allowance for the many different ways in which workers are motivated.” (IRF, 2011, 18)

4.2 Mastery

Mastery is the second essential of achieving intrinsic motivation on workplace. While motivation based on if-then rewards is about control, intrinsic motivation is about engagement. Engagement is necessary, if we want to achieve mastery in a certain type of activity. Mastery basically means improving in something that is consequential for us. Dealing with challenging and complicated problems requires an inquiring mindset and willingness to struggle while finding the unconventional solutions. It is a key element of success, because mastery starts with the desire to get peculiarly good at something.

Probably most of us regularly experience the moments while doing a favorite activity, while which time just floats away. Hungarian psychologist Mihaly Csikszentmihalyi describes these experiences as “autotelic experience” or “flow”. It is the time, when we are deeply engaged in some activity, which is important to us. The activity it self is a reward. Point of his research was, after seeing a great deal of misery during world war II, to find what contributes the most to the human feeling of happiness. Results of his research indicate, that while the absence of basic materialistic things can have a negative effect on our general psychological well-being, the increasing amount of materialistic possessions in not connected with increasing happiness, definitely not in the long run. (Csikszentmihalyi, 2004, 4:47) He has done interviews and experiments with thousands of people in order to find out what does this feeling of flow in their case represent and when do they experience it. He had found out, that this autotelic experience occurs when people do an activity or deal with the tasks, which involves a higher purpose for them and are not too hard and not too easy. It can be anything from playing piano to hanging out with your partner to making a scientific discovery. A different activity can provide flow for a different person. According to Csikszentmihalyi flow is the experience when people feel the most positive and productive. In this state goals and ambitions very clear, the engagement is so high, that many people even loose their sense of time. (Csikszentmihalyi, 2004, 8:45-17:00)

The question is, if we can encourage the flow in our everyday life. While achieving flow may be an easy task for some people who know how to do it intentionally, for some it may be much more difficult. Many claims, that flow can be encouraged in the right environment and circumstances. For example by consultations

with our employees about the tasks they do. This is important information for managers. In order to increase productivity they should simply give the right tasks to the right people. What we know for sure is, that there is very little space for flow in the motivation based on if-then rewards. For the feeling of autotelic experience there is a necessity of purpose. There are companies, which are starting to build their work environment around these values and the results seem to be great.

Stefan Falk, the vice president of Ericsson has used the principles of flow on the workplace. For example in company Green Cargo, a huge logistics and shipping company, he has devised a scheme, where he explained managers how flow works. He suggested, that the managers would make a small meeting every month with the single employees to find out, what do they think about their current task, if they are happy with it or not. Managers then accommodated the tasks to employees in a way, which promoted flow. The result was, that after two years Green Cargo had become profitable for the first time in 25 years. As a main reason, was stated the discovery of flow by the leading managers. (Pink, 2009, 117) You will find other examples if you will google Csikszentmihalyi's research.

While the flow is essential to mastery it does not guarantee its achievement. Flow does happen momentarily and mastery is achieved gradually over months and years. According to Pink there are three rules of mastery we should keep in mind.

Mastery is an attitude. It calls for the grasp to not see your capabilities as finite, but improvable. The intrinsic behavior itself is the foundation of intelligence, it venerate the learning objectives over performance objectives and welcomes ambition and effort as a way to get better at something important.

Mastery usually is a painful process. It requires a strong-will, effort, determination and deliberate practice. (Pink, 2009, 120-124) We can imagine the flow as an endless gallon of driving fuel on a very long journey, which does not change the fact, that there will be obstacles on the road. We simply need to keep in mind, that achieving mastery is a difficult process over a long period of time. This, however, is the reason why we do it, to achieve something extraordinary.

Mastery is an asymptote. In geometry it is an axis, which can never reach the curve. Simply mastery is impossible to achieve for 100%, which makes it continuously frustrating and appealing. (Pink, 2009, 126) I can think of one example from an animated show called Futurama from Matt Georing, the creator of Simpsons. In one episode of this funny show a crazy old professor Farnsworth builds the

strongest microscopic lens ever built. The lens helps him to discover the smallest particle of all, a single pixel. Based on this knowledge he invents a scientific equation explaining all the mysteries of the universe only to become absolutely depressed because of realizing, that there are no further scientific questions to answer. At the end of the episode Fry cheers him up, by saying, that he has yet to solve why the laws of the universe are what they are and not something else, which gives him a reason to keep looking for answers about the universe. This is maybe a question for the philosophers. Is the process of achieving the mastery, not the mastery itself, the ultimate purpose?

4.3 Purpose

Purpose is, of course, our final essential of motivation. Purpose provides context of our work, it is the reason of why is our work important. It is important to keep in mind, that embracing these elements is much more complicated, than dangling rewards in front of employees in order to promote control, but it brings matchless advancements and quality to the workplace.

Everybody looks for a purpose, something larger than our selves. It can be anything from contribution to the society by a scientific discovery to making a family or simply learning how to live our life well. Purpose is an essential of happiness, which you can look for based on your personal outlook through the work or outside of it. Since the purpose of this thesis is to provide an insight to the issues of motivation system we currently have rooted in our business and management I will provide some more information concerning the purpose from the corporate point of view.

The traditional management and business have taken the purpose into consideration already, but more in the decorative way. It is a perfectly welcome addition to our work, as long it does not get in to the way of making profit. (Pink, 2009, 134) The motivation based on carrots and sticks does not take purpose into consideration. I am sure anybody can think of an example of a global problem caused by the wealth maximization, which is in my opinion one of the main bugs of our economic system. This, however, does not mean that the purpose and profit maximization have to necessary contradict each other. The good news is, that more and more people seem to look for the higher purpose as a result of their work. As an example we can provide Blake Myconskie, an American entrepreneur, who in 2006 has set up a TOMS Shoes company. The company offers the modern linen shoes with a straight sole. I have seen many people wear it in London, while I was there during the

Paralympic games to support my sister in swimming, which is a sign the shoes are quite a hit. The reason they are so popular may be the business strategy Myconskie have designed. For every pair of shoes sold the TOMS Company provides a pair of shoes for children in 3rd world developing countries. (TOMS, 2013) Is TOMS is a charitable organization, which is making money for its activity by selling the shoes, or is it an organization which gives up its financial benefits to pursue good? The truth is, the answer is not very clear, but in this case it does not matter very much. It is not possible, of course, for every organization to be like TOMS, but it provides a great example of how profit maximization and purpose maximization goes hand in hand. “In fact, the rise of purpose maximizers is one reason we need the new operating system in the first place.” (Pink, 2009, 136)

Everyone certainly remember the time around 2009 when the global economy was on its knees because of the crisis which occurs once in a lifetime. At the same time as it was shocked by the mischievousness of the people who caused it. Couple of students from Harvard Business School pondered, if the problem was not caused by them. The people who are they trying to become were not entirely representing the noble goals of the economy, but most of them appeared to be knaves in much more darker story. Many of these businessmen, politicians and economists were those, who caused the crisis. Moreover, the students pondering about the crisis looked at their classmates and espied the nucleus of similar behavior. In one of the researches conducted between MBA students, almost half of them admitted, that they cheat on the regular basis. (Mangan, 2006) The students were afraid, that the title they are going to receive is no longer a praise but a disgrace. They therefore devised a plan. A plan called the “The MBA Oath”. A Hippocratic oath for the absolvents of economic schools, were they have sworn a commitment to a policy of acting in the boundaries of morale and law. It is not a legal document but a pledge to the rules of moral behavior. The purpose of the oath is basically to embrace the purpose maximization of their work, which requires a moral commitment in order to be effective. Here we can observe the fundamental foundation of intrinsic motivation in action. The Oath is long nearly five hundred words and begins as follows: “As a manager, my purpose is to serve the greater good by bringing people and resourced together to create value that no single individual can create alone.. I will strive to create sustainable economic, social, and environmental prosperity worldwide.” In two weeks almost the quarter of the students signed this oath. (Pink, 2009, 138) May Anderson, one of the finding students of this oath said, “My hope is that at our 25th reunion our class will not be known for how much money we made or how much money we gave back to school, but

for how the world was a better place as a result of our leadership.” (Anderson, 2009, MBA Oath) This is what the motivation 3.0 is trying to embrace. There is no place for these principles in the motivation 2.0, and that is why we need an upgrade, which would encourage autonomy, mastery and purpose.

The theory of the motivation 3.0 suggests, that the purpose maximization should take place alongside the profit maximization as an encouragement and guiding principle. This principle conveys itself in following ways. Firstly in choosing adequate objectives, which use the profit to accomplish the purpose. Choosing the right context is essential, and if you give your employees a certain amount of autonomy over the arrangement, which promotes specific contribution to the community, it might improve the overall engagement, satisfaction and productivity much more, than “if-then” monetary incentives. Secondly in words, that underscore more noble priorities than self-interest (The example of MBA Students). And thirdly in policies and strategy, which allow people to follow purpose in their own way.

One study has found out, that strategy oriented on pursuing purpose works very well. The strictly control-oriented work environments, as was Mayo Clinic, the chain of clinics in United States, where employees counteracted with constant pressure and demands can easily cause the burnout syndrome. The results of the study shows, that when the doctors were introduced the schedule, where they can work one day of the week on any aspect of their work which interests them, it has reduced the physical and emotional distress on a large scale. It could be anything from caring about patients to laboratory research. The employees of the clinic, which had participated in the testing time were indicating about 80% less of the burnout syndrome signs. (Shanafelt, 2009, 990) We can think about it as the 20% of the work time concentrated by purpose.

In order to lead a rich and fulfilling life, the feeling of being part of something greater and more permanent than one self is essential. People who are highly oriented on extrinsic goals are often still unhappy after the craze from receiving the financial incentives fades out. What truly promote happiness are good relations with our friends, family, feeling of the purpose and autonomy and eventually results from our effort of getting better in something that matters. By the pointless, never ending scudding for money we decrease the expense of our time for praising the things, which are really important for our overall well being. Money and other materialistic things are important to some extent, but they should be seen more like a bi-product of our work, which we should enjoy. They should be seen more like a tool, than a purpose. Therefore, once we have enough to lead a comfortable, not

extravagant life, we should spent the most of our time possible doing the activities which provide flow for us or finding out what these activities are.

To be clear, motivation based on intrinsic rewards does not refuse profits it just puts the purpose to an equal position. The ambition to utilize the profit maximization alongside the purpose maximization has the potential to revitalize our businesses and change our world.

CONCLUSION

The arguments in favor of the theory of negative effects of the motivation system based on rewards and punishments in my opinion have quite a stable background. We need to keep in mind, that the examples I have provided in this thesis are just a fragment of a much greater research. Based on personal experiences and the evidence based on proper scientific research methods leads me to believe, that this phenomenon is real and there is much more to discover. The most surprising aspect of these findings for me is the fact, that despite of its seriousness it seems to be quite ignored by the majority of scholars and managers. However there are more and more people trying to push the motivation based on intrinsic rewards into their businesses, schools and homes, because it simply has the positive effect on productivity, engagement and overall satisfaction.

My explanation, of why is this phenomenon is not promoted on a larger scale would be, that motivation system based on autonomy, mastery and purpose is much more complicated to engender than encouragement of control by carrots and sticks. The motivation system based on intrinsic motives requires more personal approach towards the needs of employees, which would cost the managers more money and time in the short run, but in the long run it has countless advantages, which promotes satisfaction and productivity at the same time. It is simply a win-win situation. Nevertheless we need to spend more time and employ competent people to design the motivation models based on intrinsic motivation, that will be stable and effective. In my opinion the models can and will vary from company to company, but the point of the principle stays the same. I believe, that the purpose maximization, which takes the place alongside the profit maximization should be the real goal of economy and all businesses. To come closer to this goal more people need to be educated about these issues so we could create a social environment where intrinsic motivation would thrive. This would of course require the shift in human thinking, where people would promote collaboration over competition.

The good news is the evidence is on our side, which makes my attitude towards the future rather optimistic. In my opinion the motivation 3.0 in addition to all its wonders, have a potential for employment of many people. Think about it, promoting purpose is a noble job with a purpose. There are so many possibilities from teaching people about the advantages of this motivation system, designing the models for various companies, keeping the research alive, to simply working in a management team, which job would be

caring about the needs of employees in order to utilize their talent in the right way which would increase productivity.

I think this topic is very challenging and interesting and it is worth to know about. Presumably, I will continue following it even after my studies, I would definitely like to expand the thesis by own research, If there will be the possibility to chose something similar for my diploma thesis.

To summarize the basic thoughts. Most of our institutions are built around the motivation system based on rewards and punishments, which desperately calls for a reconstruction. Many studies provide the evidence, which seems to prove, that carrots and sticks do not work, especially when applied to the heuristic tasks, the tasks that provide us with the solutions to the problems, which shapes our future. Moreover the system based on carrots and sticks, not only does not work but often does harm. It stifles creativity, encourages unethical behavior and diminishes productivity. In order to create productive working environment in which intrinsic motivation can thrive there is a need of the promotion of three key elements, autonomy, mastery and purpose.

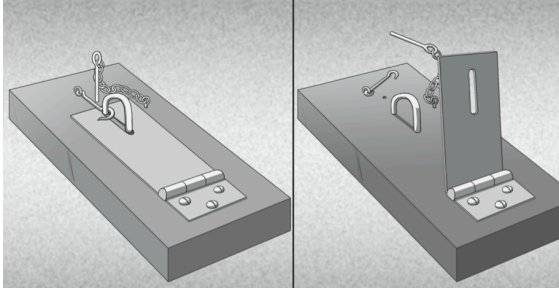
BIBLIOGRAPHY

- Amabile, Teresa, Elise Phillips and Mary Ann Collins. "*Person and Environment in Talent Development: The Case of Creativity*" Ohio Psychology Press, 1993.
- Anderson, Max. "*MBA Oath*" Accessed: 25 May 2013.
<http://mbaoath.org/about/history/>.
- Ariely, Dan, Uri Gneezy, George Lowenstein, Nina Mazar. "*Large Stakes and Big Mistakes*" Federal Bank of Boston Working Paper No. 05-11, 2005.
- Camerer, Colin. "*Behavioral Economics: Reunifying Psychology and Economics*", Proceedings of the National Academy of Sciences 96, 1999.
- Carney, Jean. "*Intrinsic Motivation and Artistic Success*" (Unpublished dissertation work) University of Chicago, 1986.
- Csikszentmihalyi, Mihaly. "*Flow, The secret to happiness*" Accessed: 12. May 2013.
http://www.ted.com/talks/mihaly_csikszentmihalyi_on_flow.html
- Deci, Edward, Richard Koestner and Richard Ryan. "*Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again*" Review of Educational Research 71, No. 1, 2001.
- Deci, Edward, Richard M. Ryan, Richard Koestner. "*A Meta – Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation*", Psychological Bulletin 125, 1999.
- Deci, Edward. "*Effects of Externally Mediated Rewards on Intrinsic Motivation*", Journal of Personality and Social Psychology 18, 1971.
- Financial, 2009.
- Glucksberg, Sam. "*The Influence of Strength of Drive on Functional Fixedness and Perceptual Recognition*", Journal of Experimental Psychology 63, 1962.
- Gneezy, Uri and Aldo Rustichini. "*A Fine Is a Price*", The Journal of Legal Studies 29, NO. 1, 2000.
- Harlow F. Harry, Margaret Kuenne Harlow, Donald R. Meyer. "*Learning Motivated by a Manipulation Drive*". Journal of Experimental Psychology 40, 1950.
- Hein, Piet. "*The Official History of SOMA*" Accessed: 27 April 2013.
<http://www.fam-bundgaard.dk/soma/history.htm/>.
- Incentive Research Foundation. "*Motivating Today's Workforce: The Future of Incentive Program Design*" Accessed: 24 Nov. 2012.
<http://theirf.org/direct/user/file/pdf/MMM2-MotivatingTodaysWorkforce-TheFutureOfIncentiveRecognitionProgramDesign.pdf>.

- K., Alex. "Google's "20 percent time" in action" Accessed: 14. May 2013.
<http://googleblog.blogspot.cz/2006/05/googles-20-percent-time-in-action.html>.
- Knutson, Brian, Charles M. Adams, Grance W. Fong and Daniel Hommer. "Anticipation of Increasing Monetary Reward Selectively Recruits Nucleus Accumbens" *Journal of Neuroscience* 21, 2001.
- Kohn, Alfie. "Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes" Boston: Houghton Mifflin, 1999.
- Lepper, Mark, David Greene, Robert Nisbett. "Undermining Children's Intrinsic Interest with Extrinsic Rewards: A Test of the "Overjustification" Hypothesis", *Journal of Personality and Social Psychology* 28, 1999.
- LSE. "LSE: When Performance – Related Pay Backfires"
- Mangan, Katharine. "Survey Finds Widespread Cheating in MBA Programs", *Chronicle of Higher Education*, 2006.
- Meijers, Jessie. "Results Only Work Environment" Accessed: 23 May 2013.
<http://www.jessemeijers.com/results-only-work-environment/>.
- Mellstrom, Carl, Magnus Johannesson, "Crowding Out in Blood Donation: Was Timuss Right?" *Journal of European Economic Association* 6, 2008.
- Ordonez, Lisa, Maurice E. Schweitzer, Adam D. Galinsky and Max H. Braverman. "Goals Gone Wild: The Systematic Side Effects of Over-Prescribing Goal Setting" *Harvard Business School Working Paper No. 09-083*, 2009.
- Pink, Daniel. "Drive: The Surprising Truth about What Motivates Us" New York: Riverhead Books, 2009.
- Shanafelt, Tait. "Career Fit and Burnout Among Academic Faculty" *Archives of Internal Medicine* 169, No. 10, 2009.
- TOMS "Corporate Responsibility" Accessed: 19 May 2013.
<http://www.toms.com/corporate-responsibility/>.

THE LIST OF PICTURES

1. The Harry Harlow's Puzzle



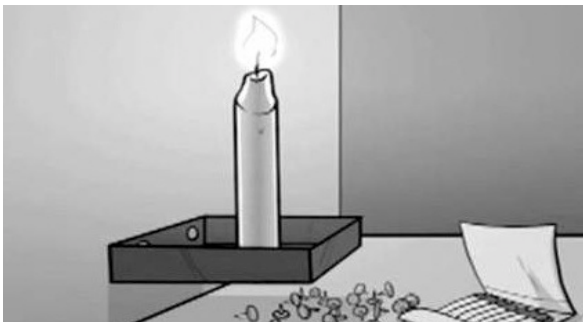
http://f.cl.ly/items/180p2A28173m1c0L0X2Q/harry_harlow_puzzle_primares_341.png

2. The Candle Problem



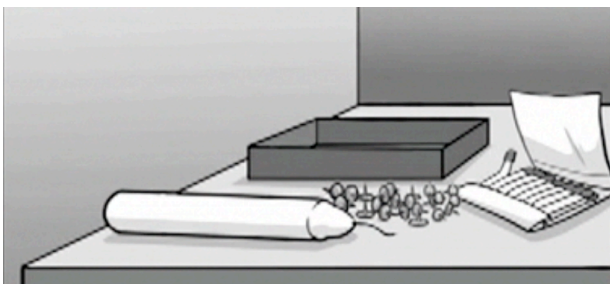
<http://lgadvisors.com/blog/wp-content/uploads/2011/08/candle-problem-heuristic.png>

3. The Candle Problem: Solved



<http://blog.simpletruths.com/wp-content/uploads/2010/08/CandleProblemSolution.png>

4. The Candle Problem: Easy Solution



<http://4.bp.blogspot.com/mgN2hIbVVf8/s1600/candle+problem+easy.png>

