

A WORKDAY – FROM AN ENERGETIC POINT OF VIEW

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Abstract. *This article examines how the stress and energy level of an employee fluctuate during a workday. This in order to understand, and possibly optimize, the performance of an employee as it may be considered likely that different employees have different energetic needs; some may for example “run out of energy” if they work long hours, others on the other side, may manifest a different attitude towards the work, which may actually make them gain energy during a workday. Nowadays different American management consulting firms are offering ways to optimize the performance of employees through improving their energy. However, their foundation seems to be based on Ericsson’s study on for example how musicians practice. Thus the present study may offer important knowledge as on how to optimize for example the workday to meet the needs of specific employees, or groups of employees, which may hopefully improve, amongst others, employee well-being, performance, job satisfaction, and ultimately, company financial performance. The research is based on previous work of Torp, Marosy and Purcarea (2014), and Torp, Albulescu, and Purcarea (2015), as well as works done by Einstein, Hawking, Tiller, Hunt, and Motoyama. The technical part of the research is conducted with the Electrophotonic Imaging Device, developed by Korotkov (2014).*

Keywords: *human resource management; performance; energy; stress; electrophotonic imaging; talent management; applied mathematics.*

Introduction

Have you ever had the feeling that you were “out of energy”? That you show up at work fresh (well, more or less fresh) in the morning, and then suddenly, perhaps after some hours, feel that you “don’t have any energy left”? It is most likely that you, like the rest of us, have felt so. There is something interesting about that feeling. It is completely absurd!

According to Einstein everything in this universe consists of energy, and thus this must also be true for everything in your being; your physical body, your feelings, emotions,

skills, qualities, competencies, dreams, etc. etc. etc. Everything is energy, so how can we feel “low on energy”?

This study does not try to answer all that, at least not in the first step. What it does is to look at the stress and energy level of different employees during a workday in order to see how they fluctuate, and thus, how it may be appropriate to manage different people, perhaps different groups of people, differently. Some may be brought to deliver top performance by reminding them to have small breaks and to eat and drink enough during the workday. Because this is what ensures that their energy level remains high, and thus gives them the necessary energy to remain calm and fulfill their work tasks. Others may need an exactly opposite kind of management in order to deliver top performance; tough deadlines, and supervision. And then again may there be a group of employees who actually need guidance regarding how they spend their spare time, as they may lose a lot of energy in between the end of one workday and the beginning of the next.

The goal of this is to help people to gain as much energy as possible, and thus to perform at their maximum, yet as the authors of this article do not believe in the “one size fits all”-philosophy, especially not in Human Resource Management (or in any other domain dealing with human beings (Dobson & O’Keeffe, 2005)), we consider it an important, and necessary, step in the evolution of the field, to begin by clarifying the energetic fluctuations of different employees during a workday.

Methodology

As Torp (2014, 2015), Torp, Marosy and Purcarea (2014), Torp, Albulescu and Purcarea (2015), and Torp, Bunea and Cipu (2016) have examined in previous studies it seems that there exists an objective and quantitative way to assess a human being based on measuring that person’s electromagnetic field. This is based on Einstein’s famous equation, $E=MC^2$; in other words, that everything in this universe consists of energy. According to Quantum Physics, four forces govern this energy: Gravity, Electromagnetism, The Strong Nuclear Attraction, as well as The Weak Nuclear Attraction.

As Stephen Hawking (2010) writes that “Electromagnetic forces are responsible for all of chemistry and biology”, it seems plausible that it should be possible – with sufficiently advanced measuring equipment – to make objective and quantitative assessments of a human being, based on that person’s electromagnetic field. Furthermore, as Professor Dr. William A. Tiller (1997) states that there is a connection between a person’s functioning and that person’s electromagnetic field, then these measurements should be able to predict for example skills, competencies, qualities, behavior, and even professional performance. In other words, such measurements may help in predicting the top performer, and, which is possibly even more important, such measurement may also be used in order to help people to develop and to gain more energy.

The energetic structure of the human being has been examined by for example Professor Dr. Valerie V. Hunt (1996), as well as Dr. Motoyama (1978). However their research, especially that of Hunt (1996), focuses more on the general health of the

human being, although it also contains certain findings which may prove useful in an HR context, whereas the research conducted by Motoyama (1978) was to show the possibility of making predictions about a person based on that person's energetic structure.

The study design

This study is based on the empirical data collected from two different large multinational companies; from now on referred to as company A and company B. Both these companies are, by coincidence, in the transportation industry, yet all the participants have office functions, some in HR, some in accounting, this for company A. In company B all the participants work with administrative tasks regarding the services the company offers.

In company B 7 employees were measured; this constitutes the entire staff of their Romanian office. In company A a total of 28 employees were measured, which constitutes a small part of one of their Romanian departments, which at the present moment has around 200 employees.

In both companies each employee was (attempted) measured 5 times during a workday; once before the start of the work in the morning at 9.00, and then with two-hour intervals until the final measurement at around 17.00.

In company B every person was measured thus five times during a day, this was possible – perhaps - because company B is smaller and there were no secondary tasks scheduled for that day.

In a company, A several of the people measured were not able to attend some of the measurements during the day, due to meetings, training, etc. Thus the graphs for this company are based on the first and the last measurements as the large majority participated in those measurements.

In order to ensure high reliability as possible, the project had been presented to the invited participants in the days before, where most of the participants had been measured in order to remove any anxiety regarding that experience, which possibly could influence the outcome of the measurements.

The measurements

The measurements on which this study is based were performed by the use of the ElectroPhotonic Imaging (EPI) Device, developed by Professor Dr. Korotkov and his team. This device measures the photons, which the human being is emitting, and based on that assesses, amongst others, the energy as well as the stress level of the person being measured (Korotkov, 2014). It may be added that with version 5.3.0.0 of the EPI-software the word “stress” has been replaced with the words “emotional pressure”. Each measurement takes less than a minute in total for a person and is non-invasive.

The graph of stress goes from 0-10 where 0-2 is defined as “calm”, 2-3 “optimal”, 3-4 “anxiety”, 4-6 “stress”, 6-8 “heightened”, and finally 8-10 as “high”. On the energy scale

the interval 0-20 is classified as “low”, 20-40 “lower”, 40-70 is classified as “optimal”, 70-90 “heightened”, and finally 90-100 as “high”.

For this study in company A the “Stress Test” which only measures 2 fingers was conducted. This because the employees in company A were relatively new to this kind of measurements, and also to enable the measurements in as short a time frame as possible. As company B is part of another study regarding the connection between stress, energy and professional performance, and thus had significant experience with the EPI measurements, a full scan was performed with them.

Analysis

In the following, we shall analyze (Bruce, 2007) the findings from this study. This will be done separately for each company. The findings regarding stress and energy will be treated separately.

Findings for company A

Stress

This graph represents the findings for company A regarding stress. The stress level is represented on the y-axis and the different people included are represented on the x-axis.

It is obvious that the morning measurement (9.00) has the largest variation as both person 7, 13, 14, 15, and 16 show large differences from the rest of their measurements. In other words, from the 16 people included in this graph 5 (31,25%) show large variations in the stress measurement in the morning. This may be due to many reasons; wild nightlife, B-person sleeping behavior, children, traffic, tension regarding the work, etc.

However, after the initial variation in the stress measurements it seems to settle at a quite stable – individual – level for the rest of the day, with the exception of person 2 who has been measured as increasing the stress level significantly at the 11:00 measurement, hereafter it shows a stable level the rest of the day.

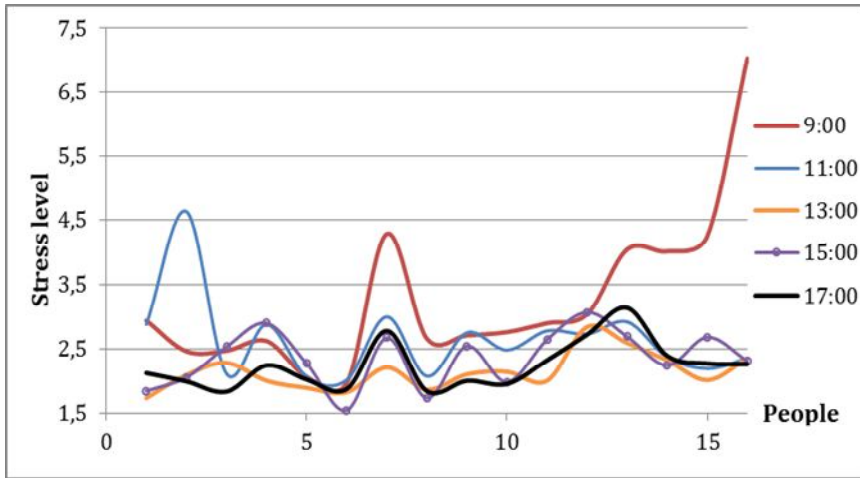


Figure 1. Findings for company A regarding stress

Continuing with the Stress Decreasing Histogram we observe that there is a general decrease in the measured stress level of the participants during the working day.

Obviously, some decrease their stress more than others, yet it is significant to observe that everybody is less stressed at the end of the working day than at the beginning. This may be considered a more or less surprising finding.

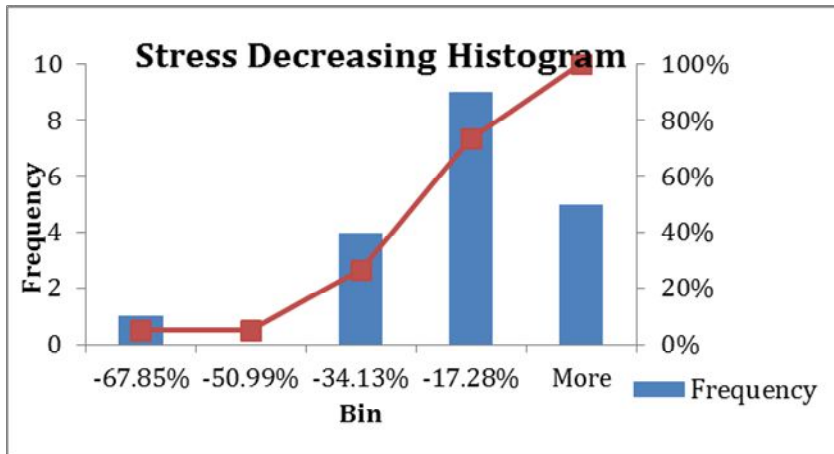


Figure 2. The Stress Decreasing Histogram of company A

Table 1. Stress decrease for company A

Bin	Frequency	Cumulative %
-67.85%	1	5.26%
-50.99%	0	5.26%
-34.13%	4	26.32%
-17.28%	9	73.68%
More	5	100.00%

Thus the measurements show that in company A the employees become less and less stressed, generally speaking, during the workday, and that the largest variation is found in the first measurement of the day.

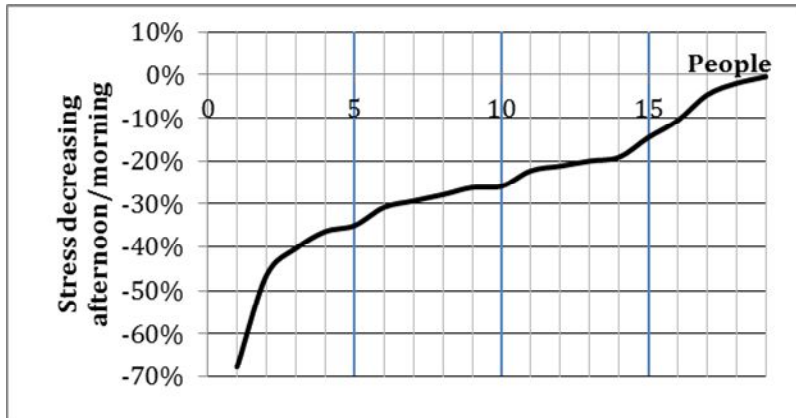


Figure 3. Stress decreasing afternoon/morning for company A

The last graph to be included is the Stress Decreasing Afternoon/Morning graph. This graph shows that in company A out of 19 people 16 have diminished their stress level during the workday. From these 13 have diminished it with at least 20%, and 6 have diminished it with at least 30%.

Discussion of the findings regarding stress for company A

As the measured employees from company A show a decrease in the measured stress level during the working day there doesn't seem to be any worry, from this perspective, regarding their ability to deal with their workload.

However, as the largest variation is manifested in connection with the morning measurement it may be that company A could optimize the performance of its employees for example by introducing flex-time (assuming that this is a practical possibility). If we assume that there is a connection between stress and performance, meaning that a stressed person doesn't perform as good as a relaxed person, then it is possible that the general performance of the almost 1/3 of the employees which show an increased level of stress in the morning interval would increase, as they could show up at work in a rhythm which fit them, and then compensate by working longer in the afternoon. Of course it needs to be clarified if the factors which cause the stress would be removed/diminished by this – like for example wild nightlife, B-person sleeping behavior, traffic, etc. – or if it would just be moved from one end of the working day to the other – like for example children; it may be equally stressful to have to pick them up at an institution in the evening before it closes, as to bring them there in the morning. (At least those are the considerations of the author who has no children.)

Thus, given the large part of the employees at company A, which manifest increased stress in the morning, it seems reasonable to assume that company A would profit by trying – if possible – to adapt its work program to the needs of its employees. A few people have shown an increase in their stress level at the end of the workday compared with the beginning of it. It may not be practically reasonable, nor profitable,

to aim at everybody being more relaxed at the end of the workday, and as the general level of stress is reasonable this may not constitute any major concern for company A.

Energy

The first graph shows that clearly the morning measurement (the 9.00 o'clock) – again – is the one deviating most from the norm. This is followed by the next measurement, the 11.00 o'clock, which is, for all but one, lower, if not much lower, than the norm. Then starting with the 13.00 o'clock measurement each participant seems to have found his/her level, which doesn't vary much for the rest of that working day.

Whether or not that level is ideal for top performance needs to be clarified by further scientific studies. It may be that a person cannot support being at such a level of energy for longer periods at a time. This also requires further scientific studies to clarify. However, should that be the case, then suggestions offered by for example (Groppel, 2000; Schwartz, 2010), or, for example of working intensely for intervals not exceeding 90 minutes at a time, and then follow up with a break, possibly doing sport, or eating something, may be scientifically proven to offer value to both the employees, as well as to the company.

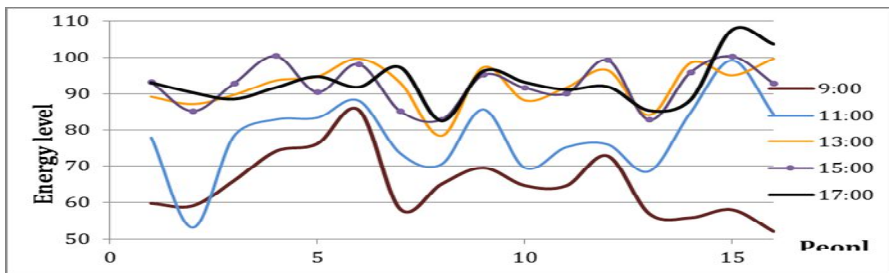


Figure 4. Energy level at company A

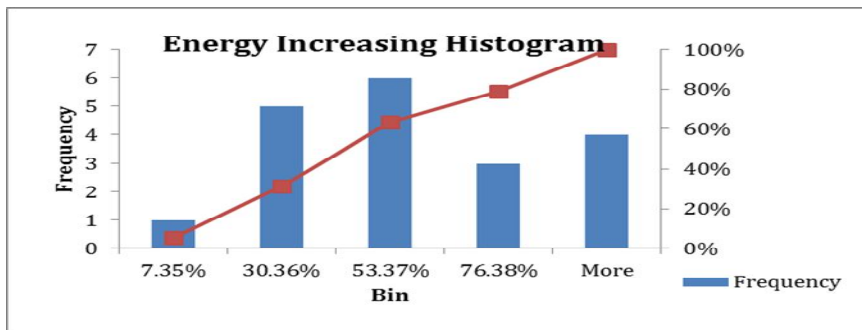


Figure 5. Energy Increasing Histogram for company A

Continuing with the Energy Increasing Histogram we see that everybody has increased their energy level during the work day, all but one have done so with more than 30%, which must be considered very relevant to understand why this happened.

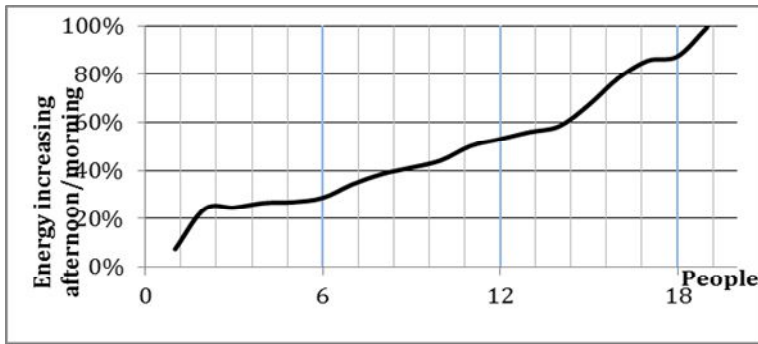


Figure 6. Energy increasing afternoon/morning for company A

The last graph regarding this, the Energy Increasing, shows that all the 19 participants measured have more energy at the end of the workday than they did at the beginning. The least having almost 10% more energy, 11 from 19 having 50% more, and a single participant even having doubled the energy level during that workday.

Discussion of the findings regarding energy for company A

Once again the results from company A must be considered good. Nobody has been measured as being below 50, which is on the scale indicated as “normal/optimal” by the EPI-software. However, once again we observe large variations in the measurements during the workday. Everybody starts out with less energy than they have at the end of the workday. This is also valid for the second measurement. Thus it seems that there may be a certain “inertia” which has to be overcome before the participants started manifesting their full energy. If it is found that there is a connection between a higher level of energy and performance, then there is a potential for optimizing the workday, which should lead to diminished costs and/or increased outcome for the company. Yet it may also be that a person cannot support such a high level of energy on a long-term basis, and thus the observations may show that the people in company A are pushed hard at the end of the workday, where the company possibly could optimize the performance of the employees by integrating activities to compensate for the intense workload; like breaks, sport, snacks, etc.

However, one relevant question arises. If an employee, for the sake of argument let us take employee number 2, shows up at work with an energy level of around 55, and leaves 8 hours later with an energy level of around 90, and this happens every day, what exactly happens in the life of this employee, energetically speaking, in the time when s/he is not working? S/he comes to work with a low energy level (relatively speaking) and goes home with a high energy level, only to appear the next day with a low energy level again? Further studies need to be conducted in order to clarify this, however, the question is both interesting as well as relevant as it may help people to optimize their energy use, and thus avoid activities which drain their energy, and thus may both they and the company benefit from increased performance. On the other side, it may also be that the drop in energy from the end of one workday till the beginning of the next constitutes a necessary recovery period, like the off-season for an athlete, and thus should be encouraged.

Conclusions regarding the observations in company A

It seems that generally speaking, the observations in company A are good. The stress level is in a reasonable zone, which indicates that there is no fear that anybody should break down with stress, and the energy is also at what seems to be an appropriate level, at least not being too low. However, based on the empirical observations it seems that there may be an opportunity to optimize the workday, and thus possibly also the performance.

The stress level fluctuates a lot in the morning, and it could be profitable, on a long-term basis, for the company to investigate if this is due to factors, which could be changed. In other words, if flextime or perhaps telecommuting were possible solutions for company A there may be an opportunity to optimize the work structure to the desires, or needs, or the employees.

Regarding the energy level. Here the issue may not so much be what happens with the energy level during the workday because all employees have more energy at the end of the day than they had at the beginning, although for some more than for others. Here the big question seems to be what happens with the energy level of the employees after the end of the workday. If the observations are representative of the general changes in the energy of the employees then it seems that there is a relatively large drop of energy from the end of one workday till the beginning of the next. Once again, assuming that people with a high level of energy are high performers the company may have an advantage in maintaining this high level of energy. It may be that the company offering sports, healthy diet, or at least knowledge about healthy diet, guidance on recreation patterns, etc. may benefit both the employees as well as the company on a long-term basis. However, it could also be that this drop in the energy is a necessary condition for the long-term optimal performance of an employee, as a human being is not a machine, and thus may not be able to function at a high level for long periods at a time.

Findings for company B

In the left side of the table we have each employee, and then the changes in stress as well as the frequency of which these changes have occurred, and then the same with energy.

In company B it seems that we can make three categories of employees, based on how their measurements change during the day:

Category 1: The people who diminish their stress and at the same time increase their energy during a workday.

Category 2: The people who remain quite stable in both stress and energy.

Category 3: The people who become more stressed during a workday and who at the same time show a loss or stability in their energy level.

Table 2. Stress and energy development in company B

<i>Employee</i>	<i>Stress decreasing</i>	<i>Stress increasing</i>	<i>Frequency</i>	<i>Energy increasing</i>	<i>Energy decreasing</i>	<i>Frequency</i>
1	-38.36%			29.07%		42.86%
2	-37.52%		42.86%	57.63%		

3	-33.88%			26.36%		
4	-4.71%		28.57%	16.54%		42.86%
5	-2.94%			10.21%		
6		28.85%	28.57%	3.19%		
7		50.00%			-9.87%	14.29%

Discussion of the findings regarding company B

It is safe to say that management may have to develop from the boss who knew everything and told everybody what to do, to the coach, or something similar, which is taking care of the specific needs of each individual. That at least seems to be a reasonable assumption regarding the needs of the employees in company B.

The approximately 40% who decrease their stress and increase their energy during the workday may not need any extra supervision or motivation from their manager. They are doing fine. However, it may be that they, like some of the employees from company A, could benefit from things which help them optimize their energy and keep their stress reduced outside the workday. It is easy to speculate about what might help them, however, the only real way to know is to ask for their suggestions, and then conduct further scientific studies.

The second group, which is quite stable, considering that their energy level increases slightly during the day, does not seem to need any adjustments, at least not in the short term. It may be that their performance could be optimized by long-term activities, like as many companies do; offer a sport or other activities aiming at increasing the overall health of the employees.

The third category may, from a certain perspective, be the most interesting. Here the stress has increased during the day. It is important to keep in mind that everybody in this company has the same job function. Thus, the same stimuli have generated a different outcome in some than in others. It is worth examining if these employees, those in category 3, would show improvements in case they would receive a stress management course, or, as for example Schwartz and McCarthy (2010) suggest, improvements could be obtained by creating a working structure where they could take a break, possibly to eat something, around every 90 minutes during the work day. There is, to the best of our knowledge, no scientific research regarding office workers which support such hypothesis, and it may easily be that the outcome of such initiatives could be an increase in stress, because now the individual employee feels that s/he has to do the same work in less time, yet it is a hypothesis worth examining in a scientific way.

Conclusions regarding company B

It seems that the employees in company B may fit, more or less, into three categories, based on the development in their stress and energy level during a workday.

Further scientific studies would be recommended in order to clarify first of all if this is a general tendency, as the test sample is not overwhelmingly large, and if so, to understand how the employees in each of these categories may be helped to optimize

their performance. Once again the question regarding what happens to people's stress and energy outside the workday arises.

Conclusions

The conclusions of this study are that certain energetic fluctuations occur in the stress and energy levels of the employees during a workday. For some employees, they seem to be to the better, for others to the worse.

It is way too early to start discussing how the workday and work structure needs to be in order to help the employees to deliver optimal performance. However, it seems to be safe to hope that with implementing Electrophotonic Imaging measurements into Human Resource Management we shall, in time, be able to improve the work structure and thus help the employees to deliver even better performance, which ultimately should create improved company performance. One thing is clear. A lot of further scientific research is necessary in order to clarify those elements.

According to Boxall and Purcell (2011), HR is involved in the performance of a company. What we wish to understand is ... how. So far HR scholars have spoken about the "Black Box" of HR (Boxall, 2011; Fleetwood, 2010; Torp, 2015), where basically some input – like work hours – goes into the company, and then, hopefully, some useful output comes out. That may or may not be an optimal understanding of what goes on inside a company. Our intention with this study, and the studies to come is to clarify, as good as possible, how each individual contributes to the performance of the company, and thus how each individual is enabled to deliver top performance. This is probably going to be very individual, and looking at how other professions, like musicians (Ericsson, 1993), or athletes train and perform (Torp et al., 2016), is probably a very good beginning, yet now it seems to be the time to look closer into the inner workings of the company, and its employees, in order to help improve well-being, motivation, engagement, and ultimately, company performance.

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