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Stabilizing the Seesaw: Accomplishing a Balanced Work Life Through the Application of Sociotechnical Systems Theory

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Abstract

This paper discusses Sociotechnical Systems theory and how it can be applied to our current technological environment in both corporate life and in an individual's personal life. It is suggested that as technology advances, the corporation and management styles must as well. Peter Drucker's and Peter Senge's theories and visions are highlighted in regard to the advancement and necessity of management. Also included is a discussion of the validity of technology addiction and the positive and negative effects technology has on society; adults, and children. In order to further solidify the effect of technology, the paper concludes with examples of lifestyles and organizations that try to maintain a work life balance and offer suggestions on how we can balance the work life seesaw.

STABILIZING THE SEESAW: ACCOMPLISHING A BALANCED WORK LIFE
THROUGH THE APPLICATION OF SOCIOTECHNICAL SYSTEMS THEORY

by

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Approved by:

Program Director
Advisor

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       This paper discusses Sociotechnical Systems theory and how it can be applied to our current technological environment in both corporate life and in an individual's personal life. It is suggested that as technology advances, the corporation and management styles must as well. Peter Drucker's and Peter Senge's theories and visions are highlighted in regard to the advancement and necessity of management. Also included is a discussion of the validity of technology addiction and the positive and negative effects technology has on society; adults, and children. In order to further solidify the effect of technology, the paper concludes with examples of lifestyles and organizations that try to maintain a work life balance and offer suggestions on how we can balance the work life seesaw.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

In today's society, many individuals are more interested in watching television, surfing the internet, and using their blackberries than they are in interacting with others face to face. While these technologies have their positive applications, society needs to recognize that an overuse of these devices can lead to valid problems. We can misuse and abuse the technologies, causing social consequences.

Toward the end of World War II, Eric Trist, and others, presented Sociotechnical Systems theory. This theory is an approach to viewing the organization as a unified social and technical element rather than separate entities; the two aspects create a whole well-functioning organization. To maintain a cohesive organization there must be a balance between the social and the technical. This theory continues to hold true in today's work life situation. We have become overwhelmed with new, more advanced technology and our social technical balance has become disproportionate.

Due to the changes in society, along with inventions and modernization, the work setting has also evolved. Employees are no longer viewed only as mindless workers, but as individuals who are competent and can offer a current skill set. The employee sees himself and his skills as an asset to the organization and does not always feel the same loyalty as was previously sensed; they know that if that particular organization does not appreciate and value their work, another will. Management styles have also changed. This paper discusses the views of Peter Senge and Peter Drucker. These two scholars have given different points of view on how management styles have evolved and what the new role of manager is, as well as noting the evolution of the organization.

A current problem is the lack of a work life balance. An individual may place too much emphasis on their personal life or bring personal problems to their daily tasks and consequently, their work suffers. This problem can also be viewed in reverse; too many companies are taking advantage of their employees by expecting them to be on call at all times due to the ease of accessing the necessary technologies. Such constant interference with the employee's life may damage personal relationships, health, etc. The line between personal life and work life has not been drawn and a resulting problem is an unhealthy interest in technology.

A work life balance can become disrupted through a person's excessive use of readily available technology. Technology addiction is now a concern and topic of debate. Some individuals suggest that technology addiction is real and akin to a gambling addiction. Japanese scientists have found a common enzyme in individuals with technology addiction and those with other process addictions. Organizations such as the Mayo Clinic find the addiction to be in the category of process addiction and promote programs to help control the addiction. The clinic also offers ideas to individuals on managing their time and how to regain a work life balance. Others opine that technology addiction is not biological but rather behavioral.

I will offer examples of people and organizations that have a different way of balancing the social and technical aspects of their lives. There is no perfect answer, but there are options. Although organizations have proven that they can advance with time, maintaining a healthy work life balance for their employees is the key to advancing with success.

CHAPTER 2

INCORPORATION OF TECHNOLOGY INTO THE WORKPLACE

This chapter focuses on the creation of Sociotechnical Systems theory. This theory offered the idea that companies should look beyond the solitary worker and view the organization as a harmonious whole (Emery, 1993). It is made up of two parts; the social and technical aspects. When these parts function in sync, the organization will likely be more productive (Trist and Bamforth, 1951). In addition to the social and technical aspects of the organization, this paper also discusses the five components that make up the organization, determining how it can compete in the industry and how it is viewed by clients and peers.

Sociotechnical Systems Theory

The Industrial Age was an era that evolved past manual labor by introducing the use of machines to assist in manufacturing and to benefit everyday standards of living (Social Science, 2006). Individuals viewed this introduction of technology as being valuable not only to industry, but also to personal and professional areas; technology is meant to benefit us in all situations. These new options brought about a change in work objectives and the structures of organizations. Over time, a group of psychologists realized this evolution and recognized its affect in organizational situations.

One such psychologist is Eric Trist. Eric Trist is a social psychologist who helped found the Tavistock Institute of Human Relations in England toward the end of World War II in 1946. During the war a new concept of work came into practice; the solitary worker was no longer the focus, it was now about teams and the worker's ability to work

within them. An organization favored the employee who possessed the intellect to be

able to think on his own, yet was able to relate to his coworkers. Trist's main focus of

research at Tavistock was to assess these various industries and observe the technology or

innovations which may or may not have facilitated productivity, in turn, offering

employees job satisfaction (Fox, 1990).

Figure 1. Eric Trist

http://www.lib.uwo.ca/business/images/trist.gif

Trist was joined by one of his peers, Fred Emery. The two worked collectively to

create Sociotechnical System theory, which is an approach to viewing the organization as

a unified social and technical element rather than separate entities. There are two design

principles and the First Design Principle viewed people as being replaceable, redundant

parts. Emery initiated the Second Design Principle which helps to validate

Sociotechnical System theory. This principle differs from the First Design Principle in

that it offers the idea that "People are implicitly making choices among ideals for

homonymy rather than self-seeking, self-serving autonomous strivings; for mutual help

and nurturance rather than their own survival in the system; for inclusion of the criterion

of humaneness along with the usual decision rules of effectiveness and efficiency

(Emery, 1993, 7)." By realizing people are not parts, but functions, the evolution of the

organization into the industrial age was able to progress smoothly and in the second

principle. While each worker is both skilled and knowledgeable, they also want to work together to achieve success.

"The socio-technical approach has focused more on work group interactions than individual performance. Properly structured work groups, it is assumed, can provide incentives, assistance, and social support better than individual job design programs… Groups are often given resources and responsibilities for areas like safety and quality control and work as a team to identify and correct inefficiencies and work issues (Rollag, 2006)." This comradery is what Trist refers to in his writings on the *Longwall Method of Coal Getting* (Trist and Bamforth, 1951). The technology was available to the miners; the Longwall Method was proven to be successful. What was not successful was the attitude of the workers. The miners needed to find a new way to complete their work as the current approach was not effective. "The key characteristic of this democratic form of organization is that responsibility for control and coordination is located with the people performing the task. (de Guerre and Hornstein, 2004, 3)." The change taken was to create a democratic environment: composite work method, composite workmen, composite work groups, and composite payment. In the miner's scenario, the technical aspect of their work was in place, but the social portion was amiss. The relationship between these two factors is the key objective of Sociotechnical Systems theory.

Objective

The objective of Sociotechnical System theory is for an organization's social and technical subsystems to be able to work independently, yet cooperatively. The basis for independent function is because advances that may be most advantageous for one of the

subsystems may not be for the other. When the two subsystems work cohesively, it is called joint optimization or as Trist calls it "best match." The design of these systems and how they will perform within the environment is what ultimately determines the success or failure of the organization (Fox, 1995).

Change to the organization cannot occur all at once, as this would disrupt any unity among the subsystems. Change needs to be initiated and gradually implemented so that the organization can advance. It is imperative that the components work together or simultaneously. Management should take an applied approach with the staff to remain current with the technologies of the company. Allowing the employees to learn from each other is an added benefit to keeping them knowledgeable on the changing components.

Joint optimization has the potential to affect the quality of an individual's work life balance. By educating the employee and furthering their skills, the individual not only becomes more of an asset to the organization by becoming a more learned person, but their self-view can grow to be more positive. The changing of the social subsystem instills flexibility in an employee and encourages interaction among the organization. A healthy, motivated, skilled employee is an asset to an organization and the world.

The work organization is not specifically made up of these two subsets, it is also made up of five components that define how the organization is viewed, how it is similar to other organizations in order to compete, their social and technical aspects, and the organization's mission statement.

<u>Components</u>

Most individuals who write about Sociotechnical Systems theory find there are four components that make up an organizations framework; environmental subsystem, social subsystem, technical subsystem, and business design. In their article, *Information Technology and Change*, A. B. Shani and James Sena suggest that there are five components that make up an organization, one in addition to the four that are more commonly recognized; strategic goals being the fifth component (Shani, Sena, 1994). These key elements combine to create the whole Sociotechnical System.

The *environmental subsystem* is based on an external look at the organization. It is composed of rudiments of the sector in which the organization is involved. It is essential for the organization to focus on the client more as the competition grows and numerous options become available for the client. All factors of the organization need to remain flexible and have the ability to broaden and adjust as the world advances.

The organization forms *strategic goals* which map out the route the organization will take to compete with similar companies. Perhaps an example in today's standards would be an organization building an in house software package that would provide them an upper hand on analyzing data in ways their competition cannot. The organization must remain consistent with their results and prove their worth as a leader in the market. By doing so, they will have an upper hand in their specific area of the sector.

The s*ocial subsystem* is comprised of the employees of the organization and the combination of their social and individual talents. The subsystem deals with the relationships within the organization, individual to individual and group to group among all levels through management and staff (Shani, Sena, 1994). These relationships remain

democratic and offer much to the employees. Flexibility is again a key factor as while the environment changes, so do management styles and ways of utilizing the technology in the organization.

The *technical subsystem* incorporates the methods, tools, procedures, and knowledge the organizational members use to transfer inputs into outputs to enhance the organization. An example of this would be in house software. In house software specific for that organization will bring leadership in the sector as long as the social subsystem utilizes it to the fullest extent for that current period.

Business design is the structure and internal environment that allows the organization to achieve its mission. The design consists of benefits and rewards offered to employees who excel in the organization and advance by learning the technology.

These components, along with the concept of Sociotechnical Systems theory, are able to be applied universally throughout organizations and have held true through the various ages. The final section of this chapter will discuss the theory's impact through the ages.

Impact of the Theory on the Industrial Age into Today

Prior to the industrial age life was harder physically (Social Science, 2006). The introduction of technology was meant to ease and benefit the world's evolving environment. Psychologists took note of these changes and offered solutions, such as Sociotechnical Systems theory, encouraging balance in order to maintain a healthy environment. This age improved lives in many aspects: work, health, economy, resources, etc. From the industrial age came machines, motorized vehicles, vaccinations,

assembly lines, and an improved lifestyle. Individuals who entered into this age became healthier and happier, less tired now that they had the technology to assist them in their work and duties. They had to take the extra steps to learn to use the technology. This brought about changes in both the home and the business.

With the introduction of the assembly line, employees mastered their task, but Trist suggested looking at the organization differently, posing the idea of the well rounded employee. Instead of dehumanizing the employee, the employee became even more knowledgeable about the organization and became a real asset; not just a cog. Technology was the catalyst, as it is today in regard to an employee's standing within an organization.

The information age allowed the employer to view their employees as unique individuals who each brought talent into the organization and built a cohesive team. "For the greater part of human history, labor has been more significant than tools, the intelligent efforts of the producer more significant than his simple equipment (Sahlins, 1972, 81)." The success of the information age was due to the availability to share information. The opportunities made available to advance society and share information included transportation of people and technology, such as the phone. These became common items and introducing new technology is a safer path to take than to change society. Through the assistance of technology, society becomes more capable to solve problems. It was realized in this era that it is not effective to solve the symptom, but to solve the actual problem at hand. The information age took a broader look and viewed the whole picture, the environment and the sector. No longer was it internal and Sociotechnical System theory pushed for this to take place.

In the information age the business model changed (Thorsen, 2006). Management began to view workers as leaders and attempted to create a pleasant working environment where the workers would be most productive. Managers looked to make work significant and created openings for growth instead of only rewarding and advancing employees. They view all of their employees as potential leaders, not just the chosen favorites as was the routine in the past. Employees became more interested in work that has significant results not just a paycheck. They took pride in the finished product.

Technology is everywhere, advancing each day. Employees no longer perform daily tasks without some sort of technical assistance. Businesses are worldwide, working on a real time basis. Technology is not just for work purposes anymore. The 1980's technical boom made personal computers a reality in homes and has grown rapidly. According to the 2003 Census, 61.8% of homes had a computer and 54.7% had internet access (Day, Janus, and Davis, 2005).

We are a more learned society; information is accessible at every turn. Politicians are planning for technology to be a part of every classroom, on every desk (Hardy, 2006). Children are learning to use computers and other devices at earlier ages and have surpassed the knowledge of many adults. "It is the initial shape of a curriculum that encourages students (and teachers) to think epistemologically, to be multimedia literate, to be thoughtful consumers and creators of knowledge, and to employ a historical perspective (Buckley, 1989)." These newcomers know even less of a society without the internet or a computer in the home.

Over time we have seen technology be both a benefit and a hindrance to society and we must make ourselves conscious of the benefits and costs of the new technologies. An example of a cost of technology would be the possible extinction of books (Calabia, 2000). The introduction of electronic publications, such as ebooks.com allows individuals to download complete books onto their devices. While this process may be convenient for those who travel or cannot access a library or bookstore, it will likely lead to the extinction of the physical book. Holding a book evokes many senses that technology does not. A physical book can be special to the individual; touch, smell, and appearance all bring about an emotional response (Allon, 2005). Some may feel losing the book would be comparable to losing a good friend. On the other hand, email and telephones keep us in touch with coworkers and loved ones all around the world and has promoted organizations to conduct business world-wide.

Where the original goal of technology was to assist, advancing society, it has also taken control of many lives. The work life balance has become askew and priorities have changed. One can argue that society is overloaded. As times changed from industrial through technical and beyond, organizations have had to change as well. Management styles have evolved as the view of employees has gone from worker to asset. The next chapter focuses on management styles and the work life balance.

CHAPTER 3

MANAGEMENT STYLES AND WORK LIFE BALANCE

This chapter discusses the evolution of management as organizations have attempted to adapt to the growing technologies over the years. Peter Senge and Peter Drucker are both well regarded for their opinions and visions regarding the future organizations management style. This chapter also focuses on the work life balance that seems to be lacking due to the unbalanced social and technical subsets of the organization. While technology continues to advance rapidly, the social aspects of the company have not.

Management styles have evolved through time and into the information age, as previously discussed. The information age espoused a partnership between management and employees as employees were no longer seen as mechanical cogs, but as purposeful entities in their own right. Peter Senge and Peter Drucker have expressed the need for managerial modification in order for the organization to persist in the ever expanding world. This new characterization of the worker has allowed the employee to take pride in his work, encouraging him to become productive. The goal of the expansion of communications and technology was to offer the employee more opportunities to excel. It is arguable whether this has actually occurred. It is advisable for the employee to be aware since if they are not careful, their work life balance can become out of balance.

Peter Senge

Peter Senge, a graduate of Stanford and MIT, has dedicated much of his career to focusing on the learning organization and systems thinking. He is the founder of the

Society for Organizational Learning and has penned a number of books. *The Fifth Discipline* has gained Senge much notoriety for his forward thinking and theory introduction.

In today's workplace, certain management has opened a new door and allowed the employee to take an active part in the organization. This new management has realized they already have the talent in the organization and they should take advantage of that expertise. The obsolete role of manager can be defined as the individual who made the decisions for the teams and set the direction in which the organization was heading. Senge, in his article *The Leader's New Work: Building Learning Organizations*, offers the idea that the organization should become one of learning and the old term "manager" should evolve into "leader." This new leader would take on the role of designer, teacher, and steward; inviting his employees to take pride and part in the organization and for them to flourish as individuals and as employees. The leader's new responsibility is to be a motivator and a role model. The learning organization is capable of altering itself to these changes.

The main role of leader as *designer* is to create core values within the organization. Secondary, the designer must create policy and structure for the organization. These two parts combined to build a respectful, well thought out organization. The mission statement can be formed through this and offer the guidelines that the staff will follow.

The leader as *teacher* can engage in the task of coach or facilitator, by enabling the employee to bring to the surface the real issues at hand through mental models. One of the problems not only with organizations, but within an individual's personal life is

that often one does not grasp the root of the problem when problem solving. One either looks for a quick solution, covering up the problem temporarily, or one mistakenly thinks he has come to the source of the issue. Later, one realizes he has not reached the source of the issue and has to start from the beginning. These mental models created by the leader as teacher bring about a sense of reality, opening the individual's eyes to what is in actuality happening, not what they assume the situation to be.

The role of leader as *steward* is dual: "stewardship for the people they lead and stewardship for the larger purpose of mission that underlies the enterprise (Senge, 1990, 12)." This duty is chiefly to maintain the order of the organization. The leader is available for the employees for guidance and assistance in their duties while remembering the reason they are all there working together is for a common goal.

This new style of leader demands a new skill set that Senge terms the Five Disciplines: building shared vision, personal mastery, mental models, team learning, and systems thinking. In order to build a shared vision, the leader must incorporate everyone's individual view and build a solid image from that, encouraging them to achieve their anticipated image. The skills involved in making this a reality are: encouraging personal vision, communicating and asking for support, visioning as an ongoing process, blending extrinsic and intrinsic visions, and distinguishing positive from negative visions. Through personal mastery the leader is able to frequently encourage the personal vision that was created for the organization by the group. This makes it even more obtainable for the employees and further strengthens their commitment.

Mental models are what the leader as teacher encourage from employees to give substance to their ideas. In order for these mental models to be beneficial, the leader

needs to: see leaps of abstraction, balance inquiry and advocacy, distinguish espoused theory from theory in use, and recognize and defuse defensive routines. Mental models can be created through team learning. If the organization is able to think together then more can be accomplished and the organization will be cohesive. Teamwork is a contemporary idea and is viewed in a positive way. A study taken by the University of Connecticut in 2003 (Center for Survey Research and Analysis, 2003), found that across the board, management and staff thought being a team player was necessary in order to get ahead. The following table shows that the individuals who were questioned found teamwork to be the most important factor of succeeding.

Figure 2. Chart Showing a Measurement of Getting Ahead in the Corporation.

Q12a-12n for employee; Q24-Q36 for employer. Now I want you to think again about you and your company or organization. On a scale of 1 to 10 where one is "not at all important" and 10 is "very important", please tell me how important are (insert item) in getting ahead in your company or organization?

Means

	Employer	Male Employee	Female Employee
Being a team player	8.92	8.50	8.84
Merit and performance	8.89	7.98	8.42
Leadership skills	8.75	8.04	8.33
Intelligence	8.43	7.99	8.40
Working well with racial or ethnic minorities	8.21	7.87	8.19
Working well with women	7.93	7.58	8.33
Fitting in	7.73	7.44	7.64
Creativity	7.70	7.34	7.51
Making money for the organization	7.58	7.80	7.43
Working well with men	7.53	7.83	8.00
High-visibility assignments	6.72	7.38	7.30
Long hours	6.35	6.93	6.77
Who you know	4.86	6.88	6.93

http://www.lpfi.org/docs/HOWFAIRReport.pdf

The fifth discipline, being systems thinking, incorporates the above four into a logical plan. Systems thinking is a universal method, as it can work on any system whether technical, human, etc. The goal of this type of thinking is not to see parts, but the whole of whatever you are viewing; the interaction and conclusion of the parts with

each other to be able to gather the whole scenario. The above four disciplines offered a restructure to our thinking process and when incorporated they lead to this beneficial outcome.

Systems thinking begins with understanding feedback. It demonstrates "how actions can reinforce or counteract (balance) each other. It builds to learning to recognize types of "structures" that recur again and again…Ultimately, it simplifies life by helping us to see the deeper patterns lying behind the events and details (Senge, 1990, 73)." Senge is stating that a solution cannot be determined by analyzing a single part. One must view each part and weigh them; what is the value of that piece, how does it interact with the others, etc. This lets the individual focus on the larger picture and become a more efficient problem solver.

Peter Drucker had his own vision of into what the organization and management would evolve. Drucker's views can be compared to Peter Senge, as will be discussed next.

Peter Drucker

Peter Drucker was one of the most respected individuals in the business world; in all classifications of organizations. He has written forty-one books, published a significant number of articles, and was a columnist in the *Wall Street Journal*. Many of his works guided organizations through changing with the advancing society. Drucker questioned economic theories and government programs, suggesting that the knowledge economy (aka: age or society) was a branch of the information age.

Drucker's description of knowledge is not only knowing the information, but also knowing what to do with that information. In his book *Managing in a Time of Great Change*, he used the analogy of a neurosurgeon. Their performance is a result of knowledge, but just knowing the skill alone will not result in a neurosurgeon (Drucker, 1995, 233-234). It is important that both book knowledge and hands on experience are instilled in the employee, making them a capable asset.

In his writings, Peter Drucker predicted different occupations will warrant assorted levels and mixes of education. This prediction has held true since as at this time the percentage of individuals obtaining an undergraduate degree has risen and jobs that once required a high school diploma are now asking for bachelor degrees. Education has taken on a new role in society and the term "educated person" has taken on a different meaning. Drucker states that workers were once generalists while now we are a specialized type of worker (Drucker, 1995, 238).

According to Drucker, all managers have the same function no matter their sector or industry. The goal of the manager is to build a fully functioning environment where all employees work together to successfully achieve the final product, whether that is a service or a physical product (Drucker, 1995, 249). The manager should focus on the strengths of the employee. They need to motivate and define the values of the corporation. Drucker viewed management as a social study, not a business function and this can be compared to Senge's new view of leader.

Drucker's idea of management being a social study and not a business function stems from his concept of management being a "liberal art" (Drucker, 1995, 250). The term liberal art, meaning a good manager, is not defined by his knowledge of techniques

and tools. Rather, the manager is defined by his whole makeup; how he interacts with people; how his employees and the organization view or respect him. The tools the manager learns and uses are important, but not as powerful as what will encourage the workers and strengthen the organization. This theory can be compared to Senge as he writes that the new leader has a new skill set built up specifically of the five disciplines mentioned previously. This skill set focuses on viewing the organization as a whole. Through these disciplines, the organization's plan is not only determined, but also the type of employees that would benefit the organization. Through proper management the entire staff will work together to fulfill the organizational goal; management can be a role model for the employee.

This idea of encouraging the worker ties into Sociotechnical Systems theory. Trist in his study of the *Longwall Method of Coal Getting* (Trist and Bamforth, 1951), realized that even though the best tools were available, without encouragement and correct social aspects in place, the system will not function effectively. Drucker is stating that management must change with the times just as the environment and technology changes. This new management must not follow the text book, but take what management skills and technique they have and incorporate it into their other areas of knowledge.

The question of managers being essential in the future was raised to Drucker, who responds yes, but not as many. In the interview he stated that management exists for a number of reasons, mainly due to the evolvement of corporations and the ever growing layers of the organization. Drucker suggests that over-management can be a hindrance on performance as employees, or people in general, do not like anyone micromanaging

them (Drucker, 1995, 345-346). Employees of today like to feel that they were hired because of their skills and for what they can offer to the organization. Also, with the incorporation of technology into the workforce and with organizations allowing their workers to work from home, the question then becomes: how does one manage the individuals who work from home full-time.

Drucker ties in the idea of businesses pledging that the workers' quality of life will become an organization-wide priority in his book *Technology, Management and Society* (Drucker, 1958, 35); He views it to be the "social responsibility" of the organization. Organizations have employees who commit to longer hours than ever before and the corporation of today needs to take that into consideration. Companies along the line of Google offer excellent benefits to their employees in order to keep them content; healthcare, on-site convenience services, gourmet dining facilities, and flexible work hours are just a sample of what is offered (Google, 2006). Maintaining a work life balance is the best policy for both the company and the employee and by offering these options, the company is hoping that the added pressures of life and stress would be lowered so that the employee would be more capable to perform their job to the highest extent.

As Drucker stated, it is the social responsibility of the organization to maintain a decent quality of life for the employee. The next section delves further and discusses the importance of a stable work life balance.

Work Life Balance

Employees need to not only be capable, but well rounded and satisfied for

organizations to benefit from them. When there is an influx in the work life balance, an employee can feel overworked and exhausted. Since technology and telecommunications are fairly new resources, the employee and employer do not know where the balance lays. Many issues can arise when the work life relationship is unequal.

The current management styles discussed above allows employees to have more of a say in the organization, bringing a sense of pride to the employee. This value encourages the employee to want to put more time and energy into the organization. The problem is, they have intertwined their two environments and have caused unsettling situations for themselves and their personal environment.

Our society has the option to always be on call due to technology. Management offers options that they assume will allow employees to be more productive and benefit them by enabling them to work outside of the office, but that is not necessarily the case. Technology such as blackberries, internet connections, and cell phones are amazing inventions that when utilized in moderation and responsibly can offer wonderful options and enhance a work life balance by allowing workers to work from home and care for their children (MIT Sloan, 2005).

Work is not always the overbearing of the two sides as life can also interfere with work. When the employee brings their personal issues into the office or workplace, it is likely their job will suffer as their attention is not fully on their work. The idea of a work life balance is a two way scenario where you need to mentally leave each side in order to enjoy or prosper in the other. Time off from work is necessary to recover and return refreshed and ready to work. Figure 3 denotes the difference when an employee intertwines their work and life versus an employee who keeps his life and work separate.

Not all situations are black and white as the figure shows. There are some individuals who need to mix their work and life, but they are able to retain a balance. An example would be an individual who has a support system at work. This employee may find that they would rely on their coworkers or the organizational benefits offered to them if something were to happen to a loved one or their home.

Figure 3. Diagram of a Balanced and Unbalanced Work Life
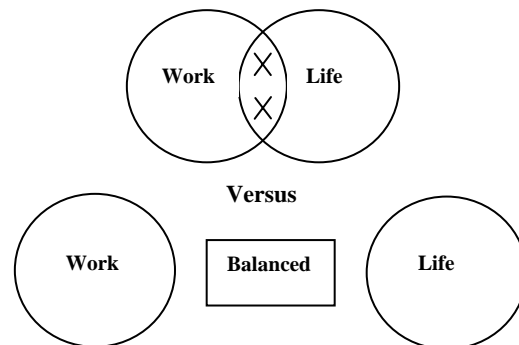
The symptoms of an unbalanced work life state have been able to be recognized; fatigue, irritability, and guilt are a few (Mayo Clinic Staff, 2006). These can lead to marital troubles, failed relationships, health issues, as well as a myriad of other problems. There are steps that can be taken to reinstate a balanced work life. The Mayo Clinic offers a variety of suggestions, such as: take advantage of your options. When technologies are involved, the individual needs to take a break from them. Hotels are taking an interest in their guests and offering to store their technological devices allowing them to completely enjoy their time off (Associated Press, 2006). In many cases, employees are so worried about the amount of emails waiting for them upon their return that they will continuously log into their systems instead of vacationing.

Time management is the most therapeutic option for regaining a healthy work life balance, but one of the hardest to achieve. Managing your time takes time in itself and

the ability to prioritize. There are many organizations that offer time management sessions and programs; it would be manageable to find one to fit your schedule. The last resort would be to seek professional help; not necessarily meaning seeking out a professional (psychologist, therapist, etc.). Many organizations have Employee Assistance Programs that are free and confidential and will assist employees with any issue that should arise in all areas of their lives.

It is possible to be a smart worker. A smart worker, in this case, means someone who can balance their life and work and make the most of both areas, but for this section of the paper it would gear toward the employee and how they can make a difference in their organization. Society has changed in many ways and job commitment is one of them. The length of time an employee remains in a position or in an organization has changed and in today's market, that length of time is much shorter. The employee is primarily interested in their own future, not the company's.

Career outlook is a new phrase in the business world. In the past people viewed their work as their job, where now it is their career; they are defined by their profession. This brings to mind Senge's disciplines. His new management encourages employees to take pride in their careers. This new leader invites his employees to take pride and a part in the organization; to flourish as employees and individuals. Career commitment is the idea of what you will do for your job; how far will you push yourself for it. The employee most likely has a plan for himself in order to know the limits of their career commitment. Normally an employee is looking for mobility in their career and will not feel a loyalty for a company if they do not find that mobility from within. The employee

will have no question as to whether they will need to find another organization if they do not feel they are on the correct path for their career (Rose and Houston, 30-34).

Technology always being at hand is one of the spokes in the work life wheel and while it has been a wonderful asset to society, it has also become a hindrance.

Figure 4. Diagram of the Spokes in a Work Life Wheel
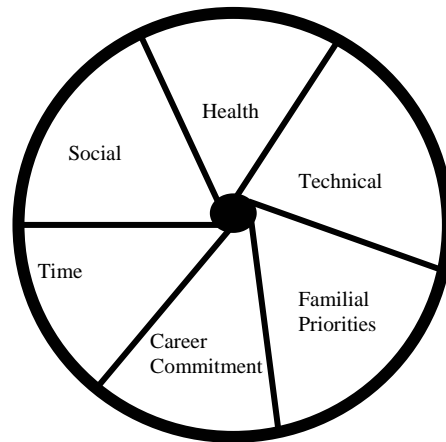
Figure 4 depicts the idea of a wheel and the spokes characterize what could be components of the work life balance. The spokes are not necessarily evenly distributed as they are not meant to be. The spokes are not meant to be even, but proportionate for the individual, varying for everyone. This diagram can be tied to the joint optimization of Sociotechnical Systems theory, or as Trist would call it "best match." Although the spokes are not balanced, they work cohesively to form the wheel and assist it in spinning smoothly, mobilizing the bicycle or organization. Figure 5 shows what the organization would look like with jointly optimized social and technical subsets versus one that is unbalanced.

Figure 5. Depiction of Sociotechnical Systems Theory Balanced and Unbalanced

Organization

Social   Technical

Organization

Social   Technical
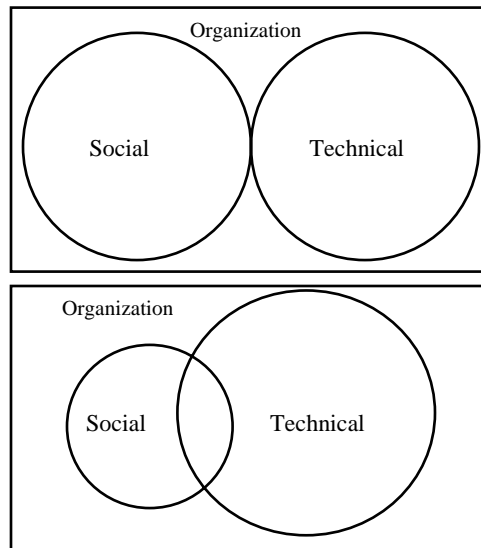
The work life imbalance has been enhanced with easily accessible technology and

has aided in causing a new form of addiction: technology addiction which will be

discussed at length in the next chapter along with the findings that came from a

questionnaire posed electronically.

CHAPTER 4

TECHNOLOGY AS AN ADDICTION

Technology has been incorporated into every aspect of our lives in hopes of advantageous results. We, as a society, have become dependent on these extras, so far that some have formed an addiction to technology. Sholton argues that technology addiction can be defined as a dependency and suggests in the bigger picture, technology dependency is a syndrome (Sholton, 1989, 6). Technology addiction can be linked with Sociotechnical Systems theory, mainly in terms of a desire for a balance; for joint optimization. The theory does not only pertain to work, but also to help balance technology and our personal lives.

This addiction does not rest only on computers or the internet, but on television, video games, blackberries, email, telephones, and much more. Technology can have negative consequences, as well as beneficial, but my main concern for this chapter is technology addiction.

An Addiction to Technology

Technology has opened doors to communication world-wide and is an asset to any professional environment; business can be transacted at any time, at any location. Companies give employees a blackberry, a high speed network connection at home, and any other resource possible for them to have the capability to do the work. We have the option of always being "on" and when we are not, we are questioned. When does work time end and personal time begin? Many employees are constantly communicating through their blackberries, checking emails at meals, and during children's recitals. They

have a static, powered on connection and feel a responsibility toward work. No one instructed them on how much or when to use their equipment.

Through a questionnaire that I posted on the internet during the summer of 2006, I gathered the opinions of 50 men and 50 women of various ages and occupations throughout the Unites States. The questionnaire can be found in Appendix A. The results of the research were surprising. Most of the articles and books I had read suggested that technology addiction was not accepted by the majority and my findings do not agree with that for the most part. My findings also encouraged me to take a look at my own environment and compare it with those who answered the questionnaire and realized I was not far from their observations and lifestyles.

One of the questions I posed was if they checked emails immediately as they arrived and if they were instructed on how to efficiently use email (figure 6). The reason I focused on email was because it is a universally used form of correspondence. Not all employees use cell phones or blackberries at work, but the majority use email and also bring those habits home with them; whether they check email at home immediately or if they turn off their devices.

Figure 6. How the Individual Answers Email

Do You Answer Emails Immediately　　　　**Were you instructed on the best use of email?**

38%

62%

19%

81%

no
yes
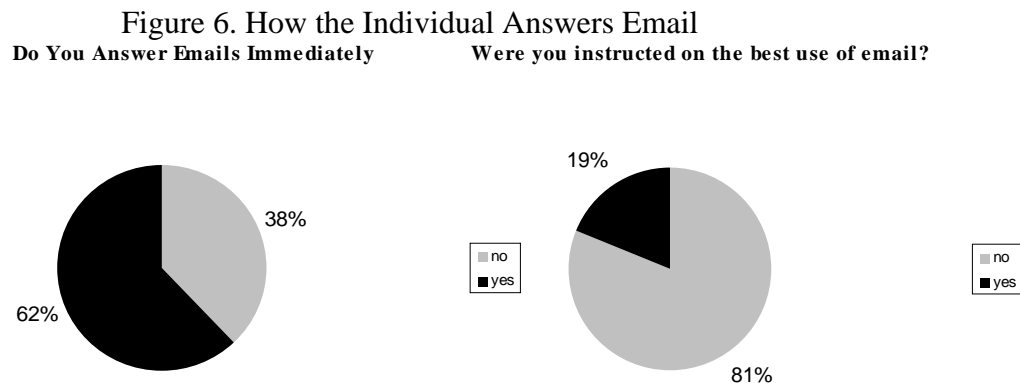
Interestingly enough, those who were given the advice to wait on checking and responding to emails still checked their emails and responded to them immediately (Figure 7). There are many advantages to waiting before checking or even responding to email. By controlling the desire to check messages the moment they arrive allows you to complete the task at hand. It is recommended to close your email program until you are ready to check it; the ideal being once in the morning and once in the afternoon. This is not an option for everyone, as some occupations require real time responses and in my opinion the correct way of handling this type of situation is to use an automatic response, assuring the sender that you are aware they sent a message and it was received.

Figure 7. Those Who Answer Emails after Instruction

Still Answer Email After Advised Not To

15%

no
yes

85%
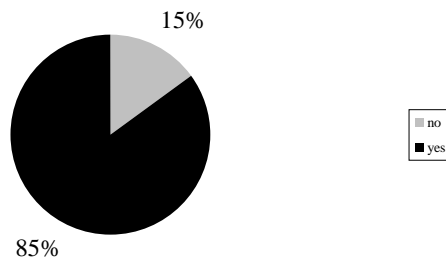
This allows the individual to prioritize the issue and correctly answer it. A real problem with immediate response is the issue at hand is not fully thought out as it might have been when written correspondence was the only option. By responding in a real time manner the individual may not completely think out the email and situation. Instead of realizing the root and solving it correctly, they are most likely to place a bandage over a problem. Real time is not always ideal.

Researchers have suggested the best way of handling this situation is not to change the email, but to modify the organization and the behaviors from within (Williams, 1998). The majority of us have not had any training or information-type settings teaching us how to best use email or internet. First the organization would need to accept this change and realize it would be most beneficial for both them and their employees over all. If they would offer such seminars, or add instruction into their orientation, employees would have more of an understanding and realize this new way of business is acceptable.

Feeding into the cause of this addiction is the ease of which we can utilize technologies. An example of this is the way the internet is developed; a well designed website will allow the user to find what they are looking for in less than three mouse clicks. Any more than that, the user will become frustrated and bored, leaving the site. These technologies were designed for betterment of our lives and while that is true with most of them, they have also caused us much confusion with time management.

Technology addiction goes beyond the work arena, as it also plays a large role in personal addictions, affecting all ages. Children are glued to televisions, video games, and the internet while adults are attached to all of those, plus blackberries, cell phones, and so on. According to the study by the Kaiser Family Foundation, 99% of homes own at least one television and 36% of those homes have a television in the child's bedroom (Rideout, 2003). This chart shows that in "heavy" households (where at least one television is on always or most of the time) the child is more prone to watch television and spend less time reading or engaging in other activities.

Figure 8. Activity of Children from Homes with Televisions
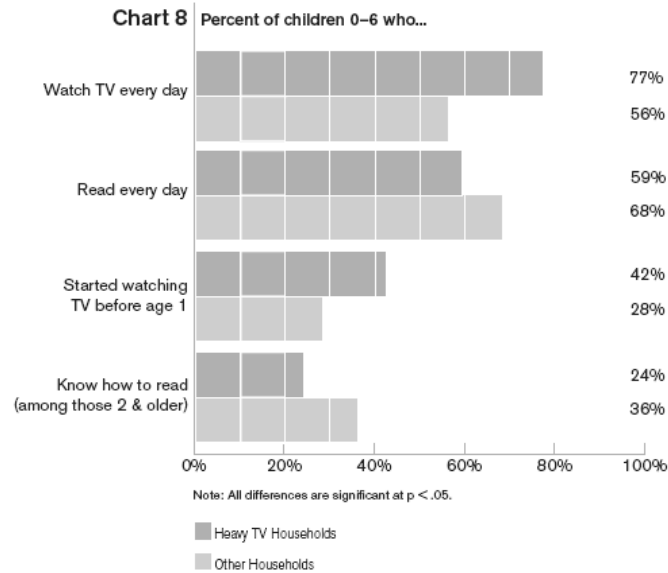
As a society we have become inactive and our health has declined. Children who are watching excessive amounts of television a day have poor eating habits (CNN.com 2003). The majority of commercials are for fast food, candy, and other types of junk food. The marketing draws children to crave unhealthy foods instead of maintaining a balanced diet. Obesity is on the rise, especially in the US and technology plays a large part in that.

Children have less of an imagination as the toys being manufactured are under–stimulating, not offering them a chance to dream. The new toys revolve around instant gratification and leave out human interaction; they are mainly based on the child and his machine. "The most important thing parents can do for their child is to read to them (Villers, 2002). By purchasing these toys parents are avoiding their responsibility and allowing a computer to read to their child. The "old fashioned" toys that foster the child's imagination, such as Lego and building blocks, are looked over due to the instant gratification of electronics. These are the toys that most benefit children by encouraging

a complete play session (Rowan, 2002). Through these simpler toys a child dreams a project, uses their skills or researches their resources to implement their dream, and then enjoys the finished product with pride, knowing it was their hard work and imagination that brought it to fruition. In order to remain competitive, toys like Lego, have created digital programs to help children build and maintain their interest in the product (Ante, 2005).

According to the American Academy of Pediatrics there are ten steps a parent can take to ensure their child is balanced with their technology and environment (American Academy of Pediatrics, 2006): set limits, plan your child's viewing, watch TV with your child, find the right message, help your child resist commercials, look for quality children's videos, give other options, set a good example, express your views, get more information. I would also like to add another option. I think as a society we are too worried about what others have and keeping up with them that we lose ourselves. Most are not interested in benefiting our children, but more interested in keeping up with appearances.

Relationships have ended as partners are too involved in checking email and communicating in chat rooms instead of making time for human to human interaction. I am not able eat a full meal or watch a movie to completion with my friends without one of them checking their blackberries, wanting to know who is online and what they are doing in the virtual world, instead of enjoying their own immediate surroundings.

This past section on technology addiction gave an insight as to how people have taken to the advancements of technology. They are overwhelmed by this speedy advancement and trying to keep up to date with the trends. It also showed the misuse of

technology and mentioned that people should be educated on the proper use of technology once that is measured. The next section questions whether technology addiction is a true disease.

A Valid Affliction?

The idea of individuals forming an addiction to technology seems unrealistic to many people. I asked in the questionnaire, if the public thought technology addiction to be a valid affliction. Women overwhelmingly thought it was a current problem while men were not as strong on the issue. A breakdown of ages along with the percentages in the age group who feel technology addiction is a real disease that affects our society is as follows:

Figure 9.

Technology a Disease According to Males

46%
54%

no
yes
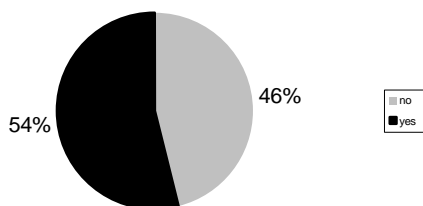
Technology a Disease According to Females

28%
72%

no
yes

13-20 Year Olds

0%
100%

no
yes

21-30 Year Olds

42%
58%

no
yes

31-40 Year Olds

32%

68%

no
yes

41-50 Year Olds

35%

65%

no
yes

51-60 Year Olds

23%

77%

no
yes

61+ Year Olds

36%

64%
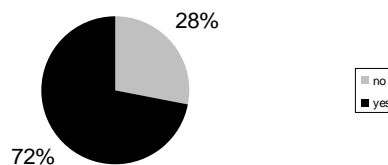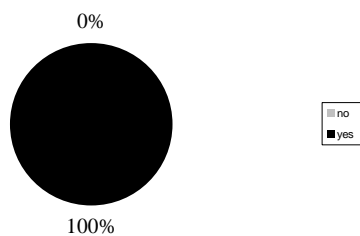
no
yes
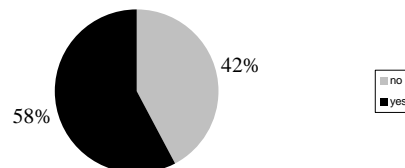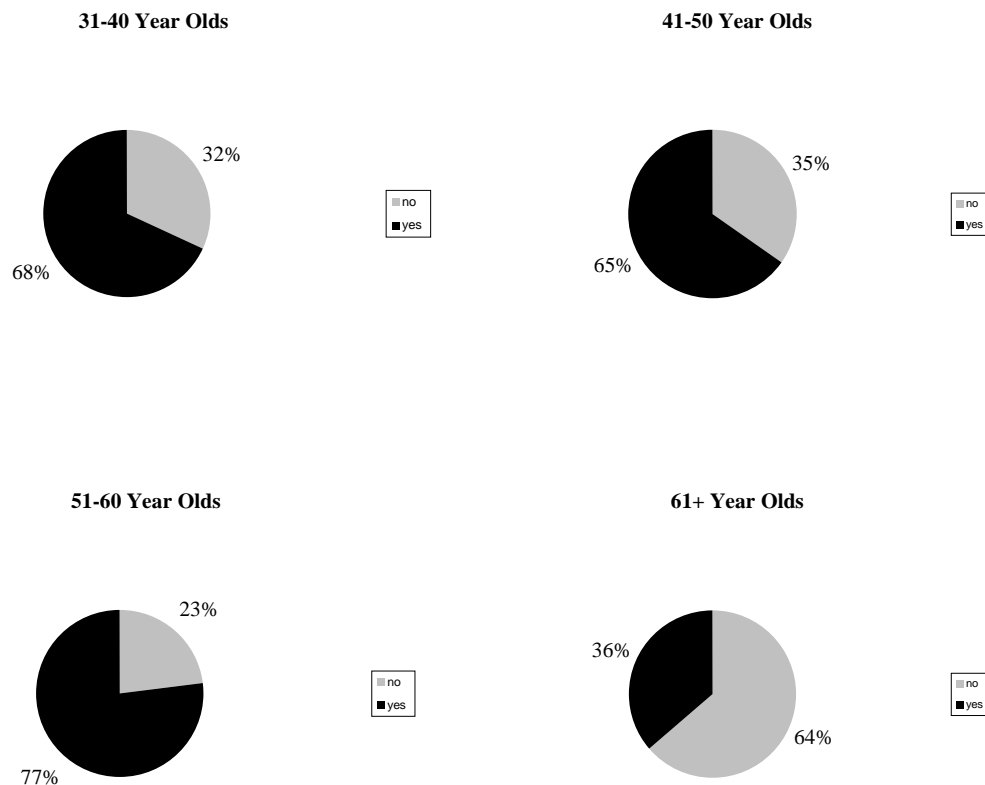
Professionals are also in disagreement to the validity of this ailment and instead of finding it to be an addiction they perceive it to be a compulsive behavior. As Orzack states in her article *Computer Addiction: What Is It?,* the main issue at hand is we do not know what levels of computer usage are considered to be "normal." Once this can be determined, if ever, then I believe the issue will be viewed as a potentially severe ailment (Orzack, 1998).

In my questionnaire I asked how much time the individual spends using devices in a day and if they ever turn them off**.** As depicted in figure 10, I graphed the individuals who noted that they spend more than six hours each day using their equipment, never turning it off, along with if they could consider technology addiction to be a genuine problem.

Figure 10.

Plugged in and recognize an addiction

29%

no
yes

71%
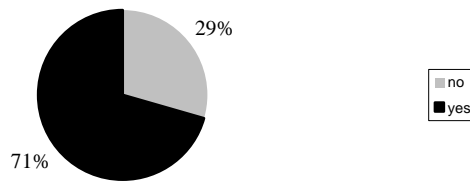
I also asked how often the individual allows themselves to be interrupted in their

activities by their devices, whether call waiting or an email, etc and if they thought

technology addiction to be a reality. In viewing the results (figure 11), I found it

interesting that 70 percent found that there might be a problem with their habits. I am

optimistic in thinking that those individuals will take control of their environment and

create a balanced jointly optimized lifestyle.

Figure 11. Chart showing
**Those who allow to be interupted frequently and recognize
a problem**

30%

no
yes

70%
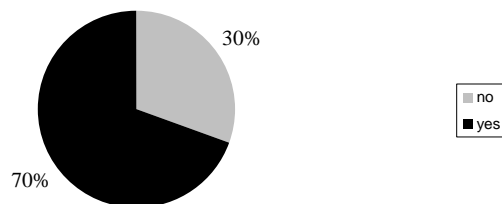
Technology addiction is often compared to gambling addiction; they have similar

symptoms and scientists have found an enzyme connection. The two deal much with

depression and causing unhappiness in all aspects of life, personal and professional. In

the next section I will discuss the symptoms of addiction.

<u>Symptoms of Technology Addiction</u>

Symptoms of technology addiction are lack of sleep, fatigue, poor job performance, and decreased interest in social relationships or activities (Thompson Gale, (2006). When the individual cannot use their technology, irritability and anxiety are apparent signs of addiction. Other signs are: a person sits down at their computer before sunset and the next thing they know the sun is rising, others will self medicate with the internet to avoid real happenings in their lives – they live in a virtual fantasy world, while another group falls into financial ruins due to always needing the latest in technology or through online gambling. There are physical symptoms as well: carpal tunnel syndrome, migraine headaches from staring at a screen, and neglected personal hygiene (Thompson Gale, 2006). Once the problem is recognized and an individual is open to help then a twelve step program is a good way to begin most addiction treatment processes.

Even when an individual enters into a twelve step program for technology addiction there is always a wireless cloud overhead. The issue with email or internet, etc is how can you completely remove these from your life when your job might rely on it? While those who do not want to drink, may choose not to frequent a bar, and those who do not want to gamble may avoid casinos, it is much more difficult to avoid a constant wireless connection when doing so may be detrimental to performing work duties.

As stated earlier, technology addiction is too new for there to be ways for resolving it. Dr. Orzack feels one method to help control this addiction is through Cognitive Behavior Therapy. This type of therapy is "a form of psychotherapy that emphasizes the important role of thinking in how we feel and what we do. It is important to identify the thinking that is causing the feelings/behaviors and to learn how to replace

this thinking with thoughts that lead to more desirable reactions (NABCT, 1996)." In other words, if our thoughts are healthy, then we will be healthy. In terms of health, neophilia is a branch of technology addiction and is a definite factor in many addiction cases.

Neophilia

Neophilia, according to Merriam Webster, is the "love of or enthusiasm for what is new or novel." Neophiliacs are a semi-modern category of individuals who are altered by and attached to technology of all types. There are three categories of neophiliacs: the "pristinians" who desire objects that are pristine and current, the "trailblazing consumers" mainly composed of young males who are interested in obtaining the latest craze in technology, and the third being people who are drawn to accumulating technological devices through the appeal of advertising (New Scientist, 2006).

A study from the Japan Yamagata University School of Medicine found that neophilia is a genetic trait caused by an enzyme; monoamine oxidase A. Some individuals produce more of the enzyme and they are the ones who are more apt to purchase and be drawn to these technological novelties (Dawley, 2006). This same gene is the culprit causing other addictions, such as gambling which ties in the topic of depression and connects the two, making them seem "subjectively rewarding (Shaffer, 2003)." There is another theory, and that is the addiction is new and cannot be based on genes. Dawley also writes that Colin Campbell from the University of York suggests that the idea of novelty addiction is sociologically founded, meaning it is a contemporary happening and is based on past observations.

This overload of technology has affected society and brings the paper back to Sociotechnical Systems theory in that a balance must be maintained for a healthy environment.

A Connection to Joint Optimization

The next realistic step is to educate corporations and individuals in order to open their eyes to what is happening in society. Educating employees on healthy email usage allows for them to be better workers; focusing on the project they are working on without concerning themselves with external influences. Computer and in house program training is already offered, so to broaden the range of program offerings would not be impossible. It would be ideal if the whole of society would realize technology addiction as a valid problem. Parents need to take more of a control over their children's technology use.

It seems as though we are rebelling against Emery's Second Design Principle (Emery, 1993). If we view this principle in a life aspect, Emery suggests that we are looking for ways to blend together instead of standing out, that we are looking for mutual relationships instead of being a loner. In actuality, most of society is attempting to surpass one another by becoming the first to own the latest technology. Society is not interested in nurturing relationships; an example is as stated above that parents do not read to their children, instead they allow a computer to do it for them.

Trist thought joint optimization within an organization would allow it to function to the best ability (Fox, 1990). Without the joint optimization in our everyday lives, we are not functioning to our best ability. This imbalance of technology over social

interaction is hurting society and hindering children from having a chance to start off healthy. If society takes on this process addiction mindset, then it is unknown what is to become of future generations.

The next chapter concludes the paper and offers case studies that demonstrate the potential for a balanced work life. It also discusses the Amish lifestyle and how their work life balance benefits or hinders them.

CHAPTER 5

STABILIZING THE SEESAW

Communities such as the Amish have a work life balance that works for them as they balance their social and technical environments. Organizations have remodeled themselves to encourage a healthy balance for their employees and Google is one such organization. Their environment is structured around encouraging the wellness of their employees. This chapter will conclude the paper by offering suggestions to maintain a work life balance and tie in the previous chapters.

A Simple(r) Life

When I think of a simpler lifestyle, the Amish and their balanced routines come to mind; they are slowly allowing technologies into their lifestyle. "The Amish approach to any new technology is to change, but they change slowly (Kilbane, 2001)." The difference between the Amish and the majority of society is they realize they must maintain a balance in conjunction with their beliefs and while they are allowing technology to assist them, they are not grasping for newest and fastest technologies the way most of society does. The Amish value simplicity and a natural way of living. They are hard workers and instill that quality in their community starting at a very young age. The Amish's stamina lies in the fact that they are able to be flexible and this is what encourages the young members of the community to continue on in their lifestyle.

The Amish now use minimum electricity and battery power, although they do not utilize the technologies that we would think twice before giving up: television, video games, motorized vehicles. These "complications" are used by the Amish in order to

better mesh with the outside world; buggies now have headlights for highway driving and while modern farming equipment is purchased, a horse will pull it instead of running on a motor. "Self-imposed limitations promote a basic, but valuable form of innovation (Tenner, 2005)." The Amish do use refrigerators and blenders, but as most of their equipment, are powered by compressed air and uses vary by the individual. An Amish lifestyle balance is not the same as a non-Amish balance, as they are on different scales, but it shows that a balance is feasible (Igou, 2003).

The Amish lifestyle balance is not one that everyone can relate to, but a company like Google can be better appreciated by the majority. Google has been praised for the benefits they offer their employees and their ability to try to create a work life balance for them. They realize their employees are hard workers and have to put in extended hours in order for the organization to remain ahead of the competition. Although Google is a powerful organization, they still have the culture of a small company, appealing to workers. A few of the amenities Google puts forth are facilities such as workout areas, washers and dryers, massage rooms, a recreation area stocked with video games, ping pong, and a piano; they also play roller hockey twice a week in the parking lot. Their dining facilities have been noted on the Food Network. The food is free, the gourmet selection is abundant, and families are welcomed to join employees for dinner, especially when long work hours cannot be avoided. Google offers daycare and eldercare options as well as excellent health benefits.

The main idea is satisfied employees create satisfied customers. This is what Trist made mention to in his article on the *Longwall Method of Coal Mining*. Obviously, being a technology company, Google has the best equipment to offer their employees, but

they also want to keep them happy and in a healthy state of mind, so that their work will be of the highest quality. Senge and Drucker have views along these lines, as well. They suggest looking at the organization as a whole and assuring each part that makes up the whole is working to its best ability. This can be done through good management, good resources and good employees.

Technology can hinder a balanced work life. There have been articles highlighting employees who are overwhelmed with work and do not realize the root of their problem is technology and those who are aware that they need a balance and are able to prioritize client relations over a ringing phone. In a 2006 article from CNNMoney.com, a number of successful business moguls bragged how technology has played a role in their success. Although Google has policies fostering good work life balance for its employees, Marissa Mayer from Google boasts that she sits down and does e-mail for ten to fourteen hours straight illustrating that some of the behavior and practices of its executives still demonstrate lack of balance. Not all of the individuals featured in the article have a "plugged-in" mentality. Amy Schulman of DLA Piper turns her cell phone off when meeting clients (Murphy, 2006). She most likely realizes the importance of paying attention, letting people know you are listening to them. I find that at meetings it is common to be interrupted by a ringing phone or the sound of someone using their blackberry or PDA.

In the next section of my paper I give a number of potential ways to find a balance. Listed are some key points that the Mayo Clinic suggests to maintain or regain a work life balance and to break away from technology addiction.

<u>Possible Solutions</u>

Completely omitting technology is not a solution to regain balance; it is in no way realistic. As stated earlier in this paper, the individual and the company have to realize there is a problem before irreversible damage falls upon their health or personal lives. The Mayo Clinic offers a number of suggestions to bring about this balance and I want to emphasize how obtainable they are. In addition to time management, as noted in Chapter 3, a few that I feel are prominent are as follow (Mayo Clinic Staff, 2006).

Keep a log. The clinic believes that by doing this you can have an objective view of how you spend your time and hopefully realize where the imbalance is and what can be subtracted from your routine. It is simple enough to follow through for one week.

Nurture yourself. Chances are a person who remains static in a chair staring at a screen is not physically or mentally healthy. The individual should stand up, stretch, take a walk, or get fresh air. They should also perform one activity a day that lets them unwind; read a book, play golf, or take a spinning class; tying in with another proposition of setting aside one day a week for recreation. The clinic suggests you power off everything and find an activity that you can share with your partner, family, or friends.

Protect your day off. This suggestion is not specifying the weekends, but more so the personal days we may take off during the work week. A vacation day should be treated as such and the employee should avoid any work related activity. If you are refreshed and take a step away from your daily work tasks chances are your work will prosper from it.

<u>Thoughts</u>

Arguably, technology began with the caveman who carved a wheel and built a fire for the first time to assist in everyday tasks and that has now progressed to overrunning society.

Figure 12. Cartoon of Caveman

JP Lacovara 2006

There must a way to regain the balance formed by Trist, et al, in Sociotechnical Systems theory. This classic theory is timeless as it was valid in the mid nineteen hundreds and can still be applied today, through a modern approach. With any area of our lives moderation is essential and although new technologies are created daily, it does not make letting go of the social aspects of our lives acceptable.

The practice of businesses utilizing technology for communication purposes may make the world seem less large, but without direct face to face interaction I think the world seems even larger. Make a vow when at work to get out of your seat and talk to your coworker down the hall instead of picking up the phone or emailing. Water cooler conversations at one time were the highlight of an employee's day and now instant messaging has taken its place.

A problem becomes a reality when parodies are written about the situation; the

writers for Saturday Night Live are notorious for poking fun at everything and everyone.

Recently they performed a sketch around the fact that people are carrying too many

gadgets on their person.

Figure 13. Saturday Night Live: Tech Pak Sketch

Are you carrying around too many electronic doo-dads? Are they cumbersome and hard to carry around? Now there's the new Tech Pak, the strap-on pack that holds all of your gear and is controlled by a single clicker and wire. Sure, it may look like a bomb, but you'll be blown away by how useful it is.
http://www.nbc.com/Saturday_Night_Live/segments/9163.shtml?id=9#imganchor

Management styles have evolved as companies realize their workers and work

styles have changed; we are more skilled and aware than we ever have been. Well-

respected observers such as Senge and Drucker have written extensively on management

and the changes in organizations. Drucker goes as far as to say management as it is today

will be unnecessary in the future. Jaclyn Kostner, in her book *Knights of the Tele-Round*

Table, offers her perception of how to manage a group who is connected and not

available in person. She states, "It is the human piece that links us and motivates us and

when we are working from distances we need to find a way to compensate for that

missing human piece (Kostner, 85*)."* This new management technique is important and

we should prepare for the possibility of it happening more widespread. More people are

working from home as the technology continues to advance. A better work life balance

need to be determined and taken into consideration as the boom continues.

With this overbearance of technology many people have become dehumanized. A loss of emotion and contact is experienced by hiding behind machines. In a USA Today article, it states that through human contact the effects of stress can be reduced as serotonin and dopamine surge and give the individual a rush of "good feelings (Elias, 2003)." The New York Times ran an article about a taxi ride that touches on the dehumanization of people. The author noted that between the driver and himself they were doing six different things: talking on a cell phone, watching a movie, driving a car, using a laptop, riding in a car, and listening to an iPod. In the hour long car ride from the airport to the hotel the only thing the two never did was talk to each other (Friedman, 2006). The author reflects on what could have transpired during that car ride and all they could have learned from one another through conversation – face to face interaction.

Conclusion

Decades ago life was challenging; physical labor was extremely tedious and the quality of life was unpleasant. Technologies were introduced and society's eyes were opened to a myriad of possibilities. Organizations took advantage of these new options and Trist realized this. He, Emery, and others foresaw that if the organization's technology was not balanced with their social aspects, then they would not succeed. Through the development of Sociotechnical Systems theory, these men offered a guideline that is not only beneficial for the organization, but also for an employee's personal life.

As time progresses, so does technology at a faster pace than ever before. The organization has evolved through this technical growth and has realized its employees are

assets and not just workers. Through the advice and writings of Peter Senge and Peter Drucker, the organization has been guided into this new age of business. Management has needed to change their techniques, not only in running the organization, but in managing the people from within and acknowledging their efforts. Organizations need to maintain a work life balance to keep employees content.

New technologies have also hindered workers. Since there is no measurement to determine what is a healthy amount of time one should spend on various technologies, some employers have taken advantage of their workers by expecting them to be on call at all times. As discussed in Chapter 3, the work environment can be compared to the wheel of a bicycle. The spokes represent the different components of a work life situation and they are at different levels depending on the individual and what works best for them. If the spokes are not aligned properly the wheel will not spin, causing the individual to lose balance. This work life wheel is not only applicable in the work environment; individuals in their personal lives have overloaded themselves with technologies starting at infancy.

Adults have lost touch with direct face to face interactions because they spend most of their time on their devices, rather than enjoying their surroundings. Children are placed in front of the television for entertainment purposes and given computers and other electronic devices that hinder their imaginative abilities. This leads to the idea that technology addiction is a valid affliction since most individuals cannot turn off their devices or vacation without a laptop in the hopes that they are not kept out of the loop at work or not able to be available to family and friends at all times. "We can't find the off switch on our devices or on ourselves (Friedman, 2006)."

All cultures and corporations are different and some offer a more balanced work life than others. We as a society need to recognize this dilemma and assume responsibility of it. Groups such as the Mayo Clinic want society to regain their balance and become healthy. We need to return to the basics of Sociotechnical Systems theory and balance our social with our technology in order to create that healthy whole.

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APPENDIX A

Questionnaire

What is your gender?
    Male   Female

What is your age?
    13-20   21-30   31-40   41-50   51-60   61+

Do you answer emails immediately as they come in?
    Yes   No

Did anyone advise you that it is not necessary to answer emails immediately?
    Yes   No

Do you bring your laptop, phone, blackberry, etc on vacation with you?
    Yes   No

If so, do you utilize these devices while vacationing for work reasons?
    Yes   No

Do you feel your work life and personal life are balanced?
    Yes   No

If not, do you feel they would be if you did not have easy access to technology?
    Yes   No

Do you ever turn off your devices?
    Yes   No

If so, when?

Do you stop what you are doing to answer your devices or email?
    Frequently Sometimes Never Emergency

How many hours a day do you spend using your devices and technologies?
    <1   1-3   3-6   >6

Do you feel technology has actually been beneficial for your work life/personal life balance?
    Yes   No

Do you feel technology addiction is a valid affliction?
    Yes   No

What is your occupation?

Do you have any additional thoughts or comments on technology?

Various Comments from the Questionnaire

With advances in technology, employers should allow those with easy access to technology, to work at least one day per week from home. This would reduce employee stress, improve work/home life balance resulting in better quality work and disposition from employees.

When it works, it's great but when there is a bug or glitch it can drive you crazy!!!!

The same things that make life easier sometimes make them harder and more demanding

The internet has revolutionized research and word processing has certainly made it easier for writing of all kinds.

Television did not come into my home until I was ten years of age I appreciate all the technology we are privileged to now enjoy & make my life easier.

Technology is not the problem; it's the way people use technology that can be problematic.

Technology is not the problem; people who don't know how to control themselves are the problem.

Technology is a definite contributor to a well rounded life if used in a proper manner

Technology has brought a wealth of knowledge into my life, allowed me access to information in seconds that would normally have taken hours/days to research, and allowed me to easily keep in touch with associates and friends around the world.

Technology bridges the communication gap and allows for flexibility between work and personal life.

Technology allows for quicker response to tasks which can help free up one's time for family and personal interests. It is important for people to learn how to properly balance their work and personal life and leave the technical devices at home.

Technology achieves greater efficiencies and speed to completion; however technology advances are never-ending as there is always a 'better' way to complete the task at hand. People always want a better way to do things. In my view, this is how technology can be seen as an addiction.

Some of the computer programs that come with computer purchases are excessive and unnecessary. I don't play computer games, use the computer as a phone (yet), I don't use the chat rooms and I hate with a passion pop ups. The computer is invaluable for researching serious and helpful bits of information and for communicating by email with others.

Personally, I have always maintained good work/life balance. However, in my opinion based on what I observe in my workplace, the invention of the blackberry has been a huge negative for allowing people to have work life balance. Many employees are expected to answer emails non-stop, during vacations, in the evening, on holidays. I am a dedicated hard-working individual, but enough is enough. People should be able to enjoy their time out of the office. How can they have work life balance if work is literally attached by a clip to their hip???

People shouldn't buy technology just for technology's sake. If you change from one PDA to another for just a little bit of a technology upgrade, is it really worth the time and effort and expense to set up, configure and acclimate yourself to the new device? I think not.

Part of my job, so I'm all for it...in moderation!

Makes life easier and difficult at the same time

Love having access to the tech. but feel that many people are addicted to it. I use it for work and for pleasure, but do not stay "hooked up" 24/7. I try to find a balance for work and pleasure.

It allows me to gather information on almost anything quickly, most times without the bother of searching through paper.

I will be getting a blackberry this week.

I thought that the computer would save lots of time, however, I find the WWW so interesting that I spend more time surfing.

I think that technology allows me the flexibility to complete some work at home that I would otherwise have to stay in the office to complete. Both are symptomatic of a work/life that is out of balance but the technology helps me select or mitigate the level of imposition.

I think some people are "techno- macho" they have a compulsion to first to master the "latest and greatest" technological advances… Even if the cost-benefits don't bear out the invested time or money.

I do not believe that Technology addition is a valid affliction, but I do believe that people have allowed technology to change their lives in a negative way. I think that the boom of technology has lead many employers expecting that their employees are reachable 24X7; thus creating a dependency to the technology. So maybe people are just addicted to work!

I believe that Technology is increasing and getting faster and better every year. Like everything else in life there are pros and cons to technology and like everything else in life technology must be balanced with one's life style.

Email is necessary and useful but clearly an addiction which has changed my life, not all for the good.

Computers and the internet have become a necessity in our lives very quickly. I need mine as much as I need to have a car!
It's a personal choice to make sure there is a balance between work and your real life.

I think it is both beneficial and detrimental to the work / life balance. It allows for working from home when necessary but also it has the lingering feeling that work is always there :)

I think cell phones have become a major addiction in life and can be a hindrance at times.

I love the internet.

I don't have a computer at home. I only turn my cell phone on when I am making a call or accepting a call.

Excessive use of mobile phones is not, most of the time, necessary. It is dangerous and disruptive and at times downright rude.