

**Leadership Styles and Physical Environments that Support
and Advance Creativity and Innovation in the Workplace**

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For all the innovators.

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We're here to put a dent in the universe. Otherwise, why else even be here?
-Steve Jobs

The nature of work is changing. Work and skills that were once highly valued are now done by machines and computers in half the time, leaving people without jobs. Innovations have brought us into this ambiguous time, and creativity and innovation are the key to thriving in this ever-changing economy.

There has been much debate as to whether or not innovation will cease to exist or have less of an impact as in the past, with some economists suggesting that all the good stuff has already been invented. While many major advances have occurred like steam engines, plumbing, electricity and internet, I believe there is a great opportunity to use collaborative creativity to innovate, especially as it pertains to the user experience. We are beginning to make the shift from the “service economy” into the “experience economy.” As authors B. Joseph Pine II and James Gilmore discuss, “this transition from selling services to selling experiences will be no easier for established companies to undertake and weather than the last great economic shift, from the industrial to the service economy. Unless companies want to be in a commoditized¹ market, however, they will be compelled to upgrade their offerings to the next stage of economic value” (Pine & Gilmore, 1998, para. 3).

Many of the early advances were not created with the user at the forefront of the creators' minds during early stages of development. While early innovations may be convenient, there is still opportunity to innovate to better support the user as well as provide what the user seeks: an experience. Economist Milton Friedman believes that wants and needs are infinite, meaning there is always work to do (Marc Andreessen, 2014). I believe organizations² must place a focus on the user and the user experience. Organizations must use creativity and innovation in order to thrive during this shift from the service to experience economy.

1 A commoditized market is one in which the buyer views a good or service as interchangeable, regardless of brand or attribute.

2 Organizations will be the term used in this study and refers to private, public and non-profit businesses.

From Coordinator to Innovator

I graduated from college with a bachelor's degree in 2008, the same time the United States' economy declined and millions of people lost their jobs. After five months of rigorously applying and interviewing for marketing and communications jobs, I finally landed a job at a Minneapolis-based direct marketing agency. As I began to learn my role as an Account Coordinator, I began to realize how lucky I was to have a job and how competitive it would be to keep my job.

This realization challenged me to reconsider my role at the agency, where the clients are numerous and there are few people to deliver to the client. I had a choice to either find ways to be more effective and efficient in my role or face being overtaken by someone who could do my job better, faster. That is where my love for innovation began. I was constantly searching for ways to increase my productivity, while reducing errors and striving to exceed clients' expectations. This challenged me to be creative in how I developed these efficiencies. I would often work late to create a new way to do a process by building Macros or working with our web developers to pull together two different types of reports into one. These reports would generate automatically to make the account management work less tedious for all future campaigns. I was willing to invest the time up-front and was more concerned with making future campaigns more efficient for the team. Ultimately, this increased my effectiveness. This innovative spirit began to expand through my team and into other departments. It made me realize how quickly an idea can spread and how easy it was to make an impact if you have a supportive leader, team and organization focused on innovation.

An innovative organization is one that realizes the impact and value that innovation can have on consumers, employees and their business and fully supports employees in their innovation work. Organizations are not limited to technological innovation. Social innovation, or the ability to collaborate across disciplines and sectors to create a sustainable society, is an area where I think organizations should also focus their attention. Organizations can then innovate to the point that they are creating new products and tools that both employees and consumers were not aware they ever wanted, driving user demand.

In order to build an innovative organization, employees must be given the freedom to be creative in a cultural and physical environment that supports creativity. Developing this environment of innovation starts with motivated employees and continues with strong leadership.

This leadership has a vision for how the organization will become and remain innovative, while providing a physical environment that supports this creative work. I will address the disciplines of American history, theories of leadership style and interior office design. I argue that multiple leadership styles and characteristics and physical space that nurture individual and collective creativity can more effectively motivate, support and further advance creativity and innovation among employees in the workplace. With the understanding of the evolution of American work, I aim to provide recommendations to readers that can be applied to each reader's personal leadership style and office environment in order to optimize creativity and innovation in the workplace.

It is important to discuss what innovation and creativity mean in the context of this study. Dr. Teresa Amabile, from Harvard Business School, has done significant research on the topic of creativity and innovation and Amabile explains, "creativity is the production of novel and useful ideas in any domain" (Amabile, 1996, p.1). She also states that the "product or idea must be appropriate to the goal at hand, correct, valuable, or expressive in meaning" (Amabile, 1996, p.1). Amabile defines innovation as "the successful implementation of creative ideas within an organization"(Amabile, 1996, p.1). These definitions will be referenced throughout this study.

So what does this mean in practice in today's environment? It means individuals and organizations cannot do things the way they have done them in the past. Organizations must create an environment for employees that allows them to be creative and give employees the tools they need to implement their creative ideas.

Chapter 1

Evolution of Work

Every organization needs one core competence: innovation.
-Peter Drucker

The nature of work has evolved due to advances in areas like progressive assembly lines and digitization. These types of advances have changed the way employees function in the workplace. We have history to reference as to how innovation has impacted organizations, jobs and the American economy. This rich history of economic highs and lows due to innovation leads me to believe that organizations must invest in innovation and their employees in order to remain competitive in the current and future marketplace. This investment will advance our nation in a competitive global environment while providing meaningful work for employees and meeting the consumers' needs. Before examining the future of work, I think it is important to review the American evolution of work to give context for the analysis of the direction of future work.

This brief summary of the evolution of work will examine the changing nature of work beginning in approximately 1750 through 2014. While there are many innovations that have impacted American work, I will evaluate what I consider to be major innovation advancements that have had the greatest impacts on American work. The innovation impacts can be viewed as negative upon initial reading, but it is important to keep in mind that innovations have also created jobs throughout history and offer us lessons. In Chapter 5 of this study, I will provide recommendations and new theories on how leadership and office space design can support innovation with the ultimate goal of higher employee satisfaction, increased collaboration and job creation.



(McKeown, 2014)

Innovation has changed significantly in the last century and is beginning to change the types of work available and the skills required to meet the needs of organizations and employees. The majority of jobs have changed from blue-collar skills based work to white-collar knowledge based work. The Industrial Revolution, starting roughly in 1750 with the steam engine, began to change the nature of work and began driving people to urban centers.

The steam engine led to other innovations over the course of

about 100 years, primarily electricity. The internal combustion engine and indoor plumbing with running water were developed between 1870- 1900, a time that many call the “second industrial revolution” (Brynjolfsson & McAfee, 2014).

Manufacturing work is not the only type that has been impacted by innovation. Agriculture changed when the horse-drawn steel plow was created in the 1850s, making plowing much more efficient and less labor intensive for farmers. In 1850, 60 percent of the working population was employed in agriculture. In comparison to 2004, only approximately 2.7 percent of the workforce was working directly in the farming industry (Rifkin, 2004).

Innovations like steam power and electricity brought significant boosts to output due to large productivity gains. These types of innovations are called General Purpose Technologies or GPTs. These types of innovations accelerate economic progress. It is important to note that GPTs “should be pervasive, improving over time and able to spawn new innovations” (Brynjolfsson & McAfee, 2014, p.76).



Steam Engine, 1750
(ShoutOut, 2013)



Assembly Lines, 1900s
(Assembly Line: Ford Motor Company factory,
Dagenham, England)

Labor saving technologies such as the Ford assembly line changed the way organizations produce goods and services in the early 1900s. In 1912, 4,664 worker-hours were needed to build a car. By the mid-1920s a car could be built in less than 813 worker-hours (Rifkin, 2004). This decrease in worker time spent on manufacturing roles was yet another one of the major shifts in the nature of work during this time. This type of innovation increased productivity by 40 percent in American industries and output per man-hour rose by 5.6 percent annually from 1919 to 1929. This impact of increased worker productivity had a great impact on blue-collar workers, causing more than 825,000 blue-collar workers to lose jobs (Rifkin, 2004).

The innovation in worker processes led to ‘technological unemployment,’ meaning

unemployment due to the discovery of “means of economizing the use of labor outrunning the pace at which we can find new uses for labor” (Rifkin, 2004, p. 24). Unemployment rose from 1 million people in 1929 to more than 15 million people at the height of the depression in 1933. Many economists blame the depression in America on the technological revolution of the 1920s (Rifkin, 2004).

In order to combat the rise in unemployment rates, labor leaders in the 1930s aimed to reduce the number of employee hours worked to match the productivity gains. Senator Hugo L. Black of Alabama introduced a bill calling for a thirty-hour work week, predicting that the passing of the bill would lead to the re-employment of 6.5 million Americans and increase purchasing power of millions of newly hired wage earners (Rifkin, 2004). President Theodore Roosevelt had dissenting views of the “30 Hour Work Week Bill” and cut the legislation, concerned that the bill would have negative long-term impact, slowing growth and hindering America’s ability to compete overseas (Rifkin, 2004).

The demand for shorter workweeks was replaced by the National Industrial Recovery Act, which allowed the government to set the length of the workweek for targeted industries aiming to employ millions of Americans. This allowed unions the right to organize and bargain collectively with management, legislation long sought by unions. The next step in igniting job creation was the Works Progress Administration (WPA) created in 1935 to increase consumer purchasing power by developing “light projects.” Light projects were labor intensive that were cheap and quick to implement. The goal was to use more manpower than machinery in order to pay as many employees as possible, placing money in the hands of unskilled and semiskilled people who were most likely to spend it (Rifkin, 2004).

Despite many government attempts to stimulate the economy, it was not until a year into World War II when the unemployment rate was cut in half. New products were developed like television and consumer electronics which helped to create new jobs for workers displaced by machines. The growing service sector also helped to create jobs, especially for women. Government spending continued providing jobs and The National Defense Highway Act in the 1950s created a new highway and a suburban culture that opened up jobs all over the nation (Rifkin, 2004). Following that, the Cold War and Vietnam War increased government dollars in defense industries causing an influx in employment for many workers.

The early 1900s-mid 1900s was a challenging time for Americans. As machines and

assembly lines began to change the nature of work, workers saw increased productivity due to machines, leaving many workers jobless. I think forethought should have been given to the next step in the innovation process; customization. Customization of products and services would not only have created more jobs for people during this time, but would also have satisfied user needs and desires.

Evolution of Modern Corporations

The modern corporation was typically marked by a hierarchical management structure. Most modern corporations' hierarchy appears as a pyramid with unskilled and semiskilled workers who perform more hands-on activities at the bottom, professional workers throughout the middle of the hierarchy who manage information flow, and a chief executive officer who serves as the decision maker at the top of the pyramid. Communication flows up and down the structure and individuals have specific roles within their placement on the pyramid (Rifkin, 2004). Companies like Ford used this structure with a moving assembly line to create thousands of identical cars in the 1920s, building more than 2 million automobiles a year. This hierarchical structure left decision making to upper management, limiting decision-making for mid-level employees and creating slow progression of communication up and down the structure.

Toyota, the Japanese owned automobile manufacturer, began exploring lean production in the 1950s. Lean production combines new management techniques with sophisticated machinery to produce more output with less labor. This form of production combines craft and mass production, allowing for a more customer-centered final product. Lean production avoids the high cost of rigidity found in the typical mass production model and is much more efficient than the craft production model where everything is produced to the buyers' specification. Lean production brings together multi-skilled workers at each level of the organization alongside sophisticated automated machines to create high volumes with a greater variety. Lean production uses fewer materials than mass production and decreases the amount of space and investment in tools needed (Rifkin, 2004).



TOYOTA

Leader in Lean Production,
1950s (Toyota Logo)

Lean production allows for multi-skilled teams to work at the point of production. Lean production allows for greater interaction among teams, supports the sharing of ideas and joint

decision-making, and creates a more cooperative team approach that more fully uses the skills of workers. The idea of lean production has spread across the world and across industries to help accommodate new computer technologies' role in our workforce. Traditional hierarchical pyramids are beginning to shift decision-making responsibilities to networks and teams. This transfer of decision-making power allows for quicker responses in a fast-paced work environment (Rifkin, 2004).

Along with the evolution of the modern corporation was the evolution of strategic management. Corporations during the 1950s and 1960s typically operated under a general management structure with a large focus on upper management and moral values. The next stage, from the 1960s-1980s, placed a focus on strategic planning. This stage of strategic management placed a greater focus on the people and on explicit strategies (clearly expressed and observable). While this phase in strategic management was prominent for years, this is a time when many think that top management was technology averse, impacting the decline in America's global competition (Horwitch, 1987).

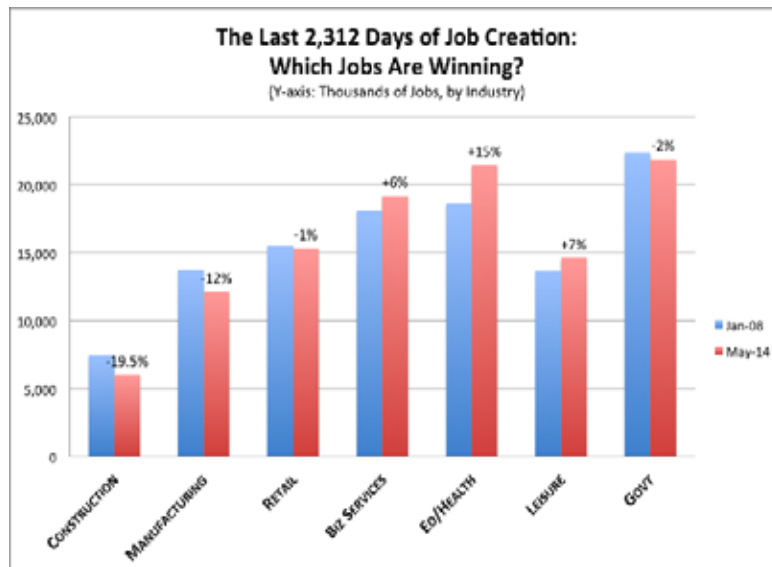
Post-modern corporations after World War II placed a greater focus on strategic management, valuing the importance of inter-organizational networks and the blending of both implicit (implied though not directly expressed) and explicit strategies. This strategic management structure also focuses on promoting innovation (Horwitch, 1987).

Humans vs Machines

This leads us to the Information Age (approximately 1970- present). The Information Age is not only changing how people communicate, but is changing the nature of work and driving us towards a knowledge-based instead of skills-based society. 80 percent of unemployed workers in 2014 are seeking work in services and production occupations; meaning about four people are applying to every one job available. Meanwhile organizations struggle to fill knowledge-based jobs such as mathematicians, medical professionals, architects and engineers (Ro, 2014). The emergence of the Experience Economy brings us to a place in history when machines and computers are able to complete tasks historically completed by humans or help humans complete tasks more efficiently. This challenges people to begin to develop new skill sets in order to remain employed.

During the Great Recession from 2008- 2010, nearly 10 million jobs were lost in the

United States. These job losses primarily involved a variety of lower to mid-paying jobs (Condon & Wiseman, 2013). As of May 2014, we created a new high for total number of jobs in the U.S. economy, but the nature of these jobs has changed. Start-ups were a major contributor to the influx of jobs and accounted for 99 percent of the new private



Graph from The U.S. Economy Finally Hit a Historic Milestone-and It Doesn't Matter (Thompson, 2014)

As workers have aged, the participation rate of work has decreased from 62.6 percent to 58.9 percent, reaching a low for the U.S. Even with the additional jobs added, the unemployment rate remains at 6.3 percent (Thompson, 2014). The above graph shows that jobs have been added in the educational and health sectors, but manufacturing jobs have decreased nearly 20%.

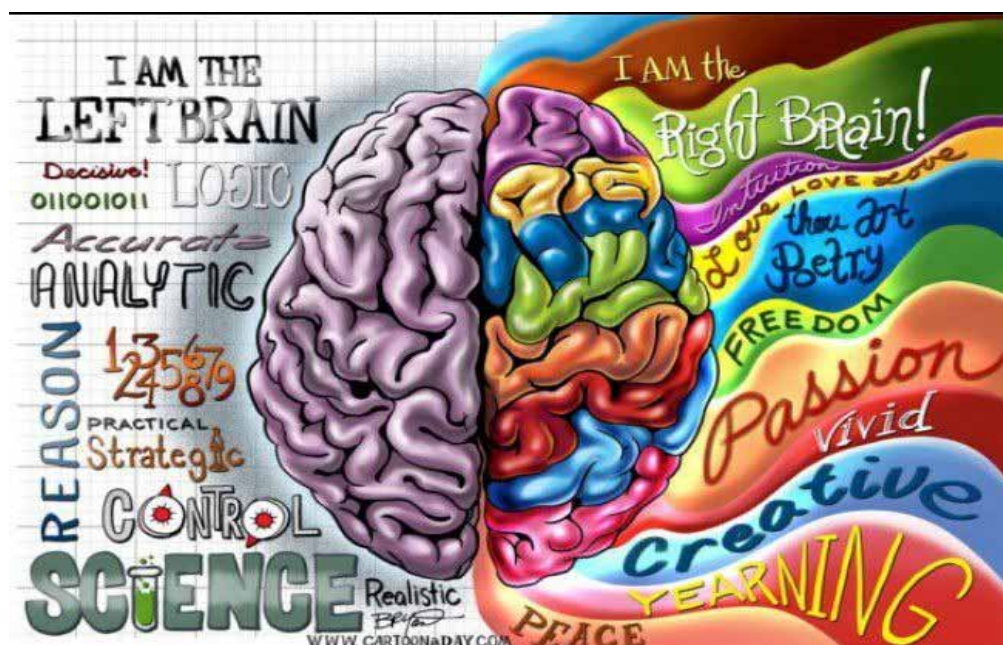
Today, advances in technology may seem to be taking more jobs than ever as it seemingly removes the need for humans. However, humans continue to have the advantage as it pertains to knowledge work and using our “right brains.” Knowledge workers typically come from the fields of science, engineering, management, consultancy, teaching, marketing, media and entertainment (Rifkin, 2004) and are becoming more and more important as we continue to see this shift from manual labor to knowledge work. The last few decades placed a high value on knowledge workers that typically operate out of their left brain, meaning these knowledge workers excel at sequential, logical and analytical thinking (Pink D., 2005). We have recently begun to see a shift in what organizations need and seek in knowledge workers. Organizations are now seeking knowledge workers who also have the ability to operate with their right brain, or have ability to also operate in a nonlinear fashion, are more intuitive and have the ability to have a more holistic view (Pink D., 2005). This is an area where computers cannot compete.

Humans have a great advantage over computers when it comes to ideation. Creating new ideas or concepts is a skill that computers cannot easily generate. Humans are able to generate

a large quantity of ideas individually or simply by discussing and building on ideas with several people. Organizations will continue to seek employees that have the ability to ask good questions that will eventually lead to new answers, ultimately leading to innovation.

Humans are also able to engage in complex communication. Humans are able to be empathetic to other humans and can discover what it is that consumers seek based on conversations. This is a highly advanced skill and we will likely continue to see the creation of experiences becoming more and more important to consumers. While being empathetic, humans are also skilled in large-frame pattern recognition. Our brains are great at taking in information using our senses and examining this information for patterns. This is our competitive advantage against machines, making right-brain thinking even more important to future work.

This chapter examined the evolution of work and reviewed examples of how innovation has impacted American society. I aimed to provide context as to how we arrived to the current state of innovation in American society. As we continue to make the shift from a service economy to an experience economy, we are left with a great opportunity to improve the user experience. Assuming our society becomes wealthier, people will probably consume more goods and services, stimulating the economy and producing more jobs. In order to build this innovation capacity, organizations will invest energy and resources into supporting creativity and innovation.



Right Brain/ Left Brain Image (Eger, 2013)

Collaboration is Key

As discussed, humans have a great advantage over machines and computers, especially when humans put their minds together. Collaboration may be the key to prevent job loss due to technology progression and could, in fact, create more jobs as new products and services are developed from these collaborating groups. Many organizations in the past adopted the “silo mentality” where each employee hoards information. Today, many organizations are realizing the power of collaboration and are taking steps to support collective brainpower in order to see organizational success.

Companies in sectors like healthcare, transportation, education, and creative industries must leverage employee talent in an environment that supports collaboration among other employees as well as machines and computers (Smith, 2013). In a recent survey of 1,656 executives from 100 different countries, the majority of executives said that collaboration is vital to the future of their organizations (“Making Room for Collaboration,” 2008). Organizations are beginning to view collaboration as a way to manage and share knowledge and are beginning to take on a great role in organizations around the world.

Collaboration not only brings new ideas to organizations, but it is also helps to energize people and provide a sense of place within a team. Allowing employees the opportunity to work towards a common goal can help breakdown silos and allow for a better exchange of information across teams.

It was mentioned that collaboration is a key to keep people competitive as we race against technology to keep our jobs, but technology has been a major contributor to how people collaborate remotely. Platforms like Quip, Asana, Trello and Google Drive allow for multiple people to contribute ideas and content to documents while allowing others to contribute in real time simultaneously. Many of these platforms have chat functions that allow discussions with team members during the project. Delegation can also occur among team members while allowing for feedback throughout the process. The importance of working together in an office versus remotely will be addressed in Chapter 3.

As Warren Berger, author of *CAD Monkeys*, *Dinosaur Babies* and *T-Shaped People* suggests, T-shaped people are becoming more important. T-shaped people start with a deep interest and expertise in a particular skill (vertical base of the T) and as they grow in their field, they branch out into many different areas of knowledge (Berger, 2009). As we begin to shift into a

time where ‘open innovation’ and ‘crowdsourcing’ are becoming more popular, the value of T-shaped people increases as there is power in diverse thinking. Allowing crowds from a variety of skill sets to contribute to a problem can increase success by nearly 30 percent. It has been found that people whose expertise is not in the problem’s particular realm may be more likely to have winning solutions (Brynjolfsson & McAfee, 2014). This reveals the importance of bringing in people from a variety of backgrounds to ask questions to solve problems, as well as supporting collaboration among employees.

Chapter 2

Leadership: Not One Size Fits All

Leadership is the lifting of a man's vision to higher sights.
-Peter Drucker

As organizations continue to seek out innovative opportunities it is important to evaluate how to motivate and lead employees towards an innovative mindset. I think leaders should customize their leadership style to support individual employees. Before exploring the roles and relationships of leaders and followers, we must evaluate the difference between a manager and a leader. Managers cope with complexity and promote stability while leaders press for change. Managers plan, organize, delegate and set goals while leaders develop a vision for the future and align people to work towards that vision. Leaders cope with change, use past knowledge to perceive and analyze change and set a clear direction for employees to work towards (Kotter, 2013). Leaders daily raise the performance of employees to a higher standard and work to abide by strict principles of conduct and responsibility, high performance standards and respect for each employee's work (Drucker & Maciariello, 2004, p. 108). A strong leader will motivate and inspire employees to strive towards innovation and produce results.

Leaders can increase the performance of employees by setting the pace for employees. As Peter Drucker, one of the most influential management thinkers states, "a leader is someone who has followers; popularity is not leadership, results are; leaders are highly visible, they set examples; leadership is not rank, privilege, titles or money, it is a responsibility" (Drucker & Maciariello, 2004, p. 108). Leaders are extremely valuable as they play an important role in organizations and also motivate employees towards higher standards.

Caveats and Effectiveness of Leaders

Before looking at leadership styles' impact on creativity and innovation, it is important to note that this study will examine the "effectiveness" of leadership styles. The term effective is a broad term that may not apply to all situations and historical and cultural contexts in which it is set. It is significant to note that the leadership approach depends on the situation in which the leader is in or the change he or she must lead through (Avolio, 2007). This is notable as there are few "universal" situations rather most are contingent upon the situation and context in which

they are placed. This context may impact what leadership characteristic or style is determined as effective or ineffective.

This caveat also applies to how a group may define its team. Bruce J. Avolio (2007) from University of Nebraska-Lincoln explores how groups identify themselves and discusses that allocentrics are more likely to view the actions of leadership as focused on what is good for the group versus self-interests. In comparison, idiocentrics view individuals as having more importance than group goals (Avolio, 2007). These elements should be taken into consideration when evaluating what an effective leadership style may be, as the way one defines a group or team may alter how effective or desirable that particular leadership style is.

Role of Followers

A key element that is often overlooked when analyzing leadership styles is the role of the follower. Avolio (2007) examines the follower and states, “followers play a more active role in constructing the leadership relationship, empowering the leader and influencing his or her behavior, and ultimately determining the consequences of the leadership relationship” (Avolio, p. 26). Much of the leadership research available considers the follower a “passive or non-existent” element when examining leadership styles. I think the employee ultimately determines whether or not he or she will choose to be creative and innovative if given the opportunity, so it is important to recognize the follower’s role.

Motivation

Motivation is a concept that is difficult to define and determine how it is derived. Why are some individuals highly motivated to achieve in specific aspects of their life, but not in others? Why do some people prefer to work towards a greater team goal, while others are more motivated to find their own individual success? Why are some people more motivated to be innovative than others? There are a great number of motivational theories and many of them address what might drive an individual towards being creative and innovative. While there is no clear theory that explicitly addresses this, I think the following deserve a deep exploration in order to understand what motivates an individual:

- Determining if these motivating factors are intrinsically or extrinsically based

- Studying theories that support these assumptions
- Considering the role emotions play in motivation and the sources and types of motivation

While this chapter will not address all of the motivational theories, I hope it will help leaders and team members to understand and recognize how they might better integrate their leadership and working styles to better support team members.

Motivational scholars and psychologists have offered a variety of opinions over the years as to the origin and definition of motivation. Scholars have defined motivation as the act or process of motivating (Motivation, 1873) or the force that energizes, directs and sustains behavior (Schmidt & Scholl, 2002), or the internal force that produces actions on the basis of the momentary balance between our needs and the demands of our environment (Dorman & Gaudiano, n.d.). For the purposes of this study, the definition of motivation discussed in this paper will be based on the definition of motivation being “the force that energizes, directs and sustains behavior” (Schmidt & Scholl, 2002, para. 2).

Dispositional Approach

There are a number of approaches to the study of motivation and each approach contains a set of related theories. The Dispositional Approach is said to be central in regulating behavior and emphasizes the role of stable dispositions in explaining the differing behavioral patterns in individuals. This theory is based on a set of assumptions: individuals have a certain set of dispositions that are consistent across time and situations: individuals have values, needs, personality traits, and their own self-concept or perception of themselves. All of these characteristics are strong predictors of how individuals will respond to different situations and the amount of effort individuals exhibit is a function of their internal dispositions (Schmidt & Scholl, 2002). Several *Needs, Process and Content* Theories were created to attempt to answer what outcomes individuals are motivated to obtain under the Dispositional Approach.



Maslow's Hierarchy of Needs
(McLeod, 2007)

Motivational Theories and Characteristics

	Basic Existence Needs Met (physiological, safety, love and belongingness)	Motivated by Intrinsic Rewards (value, meeting personal goals, etc)	Motivated by Extrinsic Rewards (\$, approval, etc)	Seeks Feedback/ Approval from Others/Reinfo rcement	Seeks Self Approval
Dispositional Approach	x				x
Maslow's Hierarchy of Needs Theory	x				x
Aquired Needs Theory	x		x	x	x
Alderfer's ERG Content Theory	x				x
Self-Concept Motivation Theory	x			x	x
Sources of Motivation Theory					
Intrinsic Process Motivation	x	x			
Instrumental Motivation	x		x	x	
External Self-Concept	x		x	x	x
Internal Self-Concept	x	x	x		
Goal Internalization	x	x			
Cognitive Approach					
Expectancy Theory	x		x		
Decisional Balance Theory	x			x	x
Goal Setting Theory	x	x	x		x
Control Theory			x	x	x
Behavioral Theories	x		x	x	x
Social Learning Theory	x		x	x	x
Affective Approach	x		x		

Values Relationships /Affiliation	Accounts for Cultural/Life Experiences	Motivated by Power	Unsatisfied Need Motivates	Focus on Task	Focus on Goals	Motivated by Values	Accounts for Emotion	Prefers Group Work
X			X					
X			X					
X	X	X						X
X			X					
X	X							
X		X	X	X				
X		X						
X		X						
								X
X					X	X		
					X	X		
X								
	X				X	X	X	
					X			
X	X							
	X						X	

Needs Theories

The Needs Theory states that an unsatisfied need is a source of individual motivation. An individual will take action in order to help satisfy currently unsatisfied needs (Schmidt & Scholl, 2002). Maslow's Hierarchy of Needs Theory is built on the assumption that people need certain needs fulfilled in order to reach self-actualization, the ultimate goal in this theory. Self-actualization can be loosely defined as an individual using the full capacity of his talents and potential. The basic framework of this theory states that people have physiological needs (food, sleep, stimulation, activity), safety needs (security, protection from harm), and love and belongingness and esteem needs (self respect, personal worth, autonomy). All of these needs must be met to meet self-actualization. Self-actualization is rarely met in most cases. Self-actualization tends to lead to a value-driven life, where people consistently act on their values (K.Lorenz, HP5100 lecture, January 25, 2012).

Alderfer's Existence, Relatedness and Growth (ERG) Content Theory was created to address some of the limitations of Maslow's hierarchy theory of motivation. This theory states that individuals have existence needs (basic human needs including security and safety), relatedness needs (need to have high quality relationships) and growth needs (need for continued self-development and competency). Unlike Maslow's hierarchy, this theory allows for different levels of needs to be pursued simultaneously and allows the order of the needs to be different for different people. The ERG theory acknowledges that if a higher level of needs remains unfulfilled, the person may regress to lower level needs that appear easier to satisfy. Given the flexibility of this theory, it allows for flexibility for a wider range of observed behavior ("Erg theory," n.d.).

In the 1940s Abraham McClelland created his theory of needs that identified the basic needs of humans: physiological needs, safety needs and the need for belonging, self-esteem and self-actualization. David McClelland later built on Abraham McClelland's work and identified three motivating drivers that each individual has and stated that these motivators are learned, so this theory can be considered an Acquired Needs Theory or Learned Theory (Straker, 2010). This theory states that each individual has three motivating drivers where one acts as the motivating driver. This theory takes into account that the dominant motivator is dependent on an individual's culture and life experiences. It is built on the assumption that each person has an achievement, affiliation and power motivator. A person with achievement as the dominant motivator has a strong need to set and accomplish challenging goals, take calculated risks to achieve these goals:

such a person enjoys regular feedback on progress and often likes to work independently. Finally, a person with affiliation as their dominant motivator prefers to belong to a group, desires to be liked and tends to follow the group, favors collaboration over competition and tends to dislike high risk or uncertainty. Finally, the person with power as their dominant motivator wants to control and influence others, enjoys winning arguments, likes to compete and win and appreciates the status and recognition that comes with winning competitions. Those with a strong power motivator are often divided into two groups; personal and institutional. The person who has personal power drive tends to want to control others, while people with institutional power drive enjoy organizing the efforts of the team (“McClelland’s human motivation,”n.d.).

I think that in order to fully evaluate how a person is motivated towards innovation, it is important to focus on the relationships the individual builds and how that interaction might inspire a person to innovate. Therefore, I think the dispositional-based theory does not explain how an individual is motivated towards an innovative mindset.

McClelland’s theory appears more complete to me since it takes into account the impact that culture and experience have on an individual. I believe the framework in which we act is built upon life experiences and the culture in which we live. This framework is a large factor in determining what will be a motivating driver for one individual and not another. For example, some cultures value competition and achievement and see it as a positive characteristic, while a different culture may see the relational side of being a part of a group as a more positive attribute. The physical environment can also impact a person’s motivation under this theory’s premise, as physical environment plays a role in the culture created. This theory also examines the variety of drivers that might impact a person to be motivated, but does not examine how a person may be motivated by differing drivers from day to day.

Self-Concept Motivation Theory

The Self-Concept Motivation Theory attempts to explain motivation in terms of the individual’s need to reinforce and validate his or her self-concept. “The self-concept is viewed as a set of self perceptions the individual holds about his or her competencies, traits and values” (Schmidt & Scholl, 2002, para.6). It is important for a leader to get a sense of how individual employees are motivated by their self-concept so the leader can customize their leadership style to help support individuals. By allowing employees to act within their values, leaders can get a

better sense of what drives them and provide feedback to further support employees.

The basic unit of this theory is an individual's social identity. Social identity consists of an individual's perception of her role in important reference groups and how she interacts with various groups with which she associates. "As humans, we are constantly assessing how social encounters either enhance or diminish our status" (C. Bonnema, *The Gift of Feedback*, February 28, 2012). It is common for individuals to have multiple identities as they move between various groups. One may act differently with co-workers than with friends. The Self-Concept Motivation Theory states that individuals are motivated to maintain, reinforce and enhance their perceptions and perceptions of others through their behavior to elicit feedback that ultimately validates self-perceptions (Schmidt & Scholl, 2002).

The importance an individual places on these internal and external self-perceptions varies by individual. Individuals who are motivated by self-concept internals are motivated by the validation of their own standards and self-perceptions. A primary component of internal motivation is receiving task feedback about the individual's competencies. The individual will engage in challenging activities to prove to himself that he is good at something. The individual also engages in activities that are consistent with his values and moral code (Schmidt & Scholl, 2002). Self-concept external self-perception is primarily focused on eliciting approval from members of their reference group. Those who are motivated by external validation are motivated by acceptance from others, feelings of worth received from others, and the status received by feeling that one is an important part of the group. This theory states that motivation is not a dispositional variable itself, but values and self-concepts interact within situations in predictable ways to produce a consistent level of motivation. The theory also proposes that individuals tend to be motivated by all five sources of motivation (acceptance, worth, status, competencies and values) at one time or another, but individuals tend to be motivated by one dominant source over others (Schmidt & Scholl, 2002).

The Self Concept Theory encapsulates how an individual reacts to the view of herself as well as to how others may view her. I think an employee's self concept is an important piece to examine within motivation, since much of what an employee does is dependent on how she sees herself and how she wishes to be perceived by others. I see these perceived views as having a direct impact on actions, which then leads to what motivating factors will trigger these actions. Another important factor self-concept helps develop, as noted above, is social identity.

Both employees' self-concepts and how they wish to create their social identity will impact how motivated they are to pursue innovative outcomes. If they see themselves and wish others to perceive them as innovative, I believe they will pursue innovative outcomes.

Sources of Motivation Theory

The Sources of Motivation Theory was created to help integrate dispositional, need and content theories into one theory. The theory addresses intrinsic process motivation, instrumental motivation, external self-concept-based motivation, internal self-concept-based motivation, and goal internalization. Individuals motivated by intrinsic process motivation engage in activities they enjoy and are more focused on the task itself, rather than the results that motivate them. These individuals are indifferent to task and social feedback.

Individuals seeking outcomes such as pay and praise from others are inspired by instrumental motivation. These individuals are under the assumption that they are in an exchange relationship where individuals receive something in return for their work. Individuals under the external self-concept-based motivation, behave in ways to help illicit social feedback that is consistent with their self-perceptions. Once the feedback is obtained, which is generally positive, individuals find it necessary to share these results with members of their reference group. The individual relays this information in order to gain acceptance, worth and status. The individual typically has the need for affiliation and power.

Individuals who are inner-directed fall under the internal self-concept motivation theory. They strive for a higher level of competency and the motivating force for these individuals is task feedback. It is important to them that their efforts are vital in achieving outcomes and their ideas and actions have contributed to and are instrumental in performing a job well. Goal internalization occurs when individuals adopt attitudes and behaviors because their content, or cause for motivation, coincides with their value systems. The individual must believe in the cause and be willing to work towards the goal. This individual has the desire to benefit others, independent of the need to secure pay, recognition or achievement (Schmidt & Scholl, 2002).

This theory appeals to me as it not only explores much of what the Self Concept Theory attempts to explain in regards to the impact of one's perception of one's self and of others, but it also explains how an individual's value system impacts motivation. I think an individual's value system has a vital impact on the level of motivation and effort an individual is willing to make.

The culture and the environment in which we live will impact our value systems and will place different emphasis on certain values. This theory seems to have compartmentalized each of the motivating theories. I think this theory would be more complete if it examined the way people move in and out of these different concepts at any given time based on situations and an individual's personal development.

Cognitive Approach

Another approach to the study of motivation is the Cognitive Approach. This approach focuses on the influence of individual choice and decision-making. This approach is based on a set of assumptions. One assumption is that individual behavior can be explained as a decision process. Secondly, the motivation is goal directed, where the individual is attempting to achieve certain personal goals. The third assumption is that individuals make rational choices among differing situations based on perceived consequences of each behavior, their relationship to goal attainment and/or their need to feel fulfilled. The final assumption is the individual's motivation varies in response to the changing perceived consequences of each alternative (Schmidt & Scholl, 2002).

It is important to examine the impact of individual choice in this theory. Motivational Theories explored thus far have failed to mention or examine why individuals make an active choice in how they will direct their behavior. I think it is important to examine the perceived rewards or consequences that may impact the individual's motivation and how close he is to obtaining the reward or consequence will influence his motivation towards that goal. This is where the leader can help direct behavior. Leaders can determine if rewards will be given if certain criteria are met and can also provide feedback on how far away goal attainment is, ultimately motivating the employee further.

The Expectancy Theory

The Expectancy Theory, known as a process theory, is the most often used of the cognitive theories. This theory's purpose is to explain how people make choices among behavioral alternatives. It focuses on outcomes rather than on needs like Maslow and McClelland ("Expectancy theory of," n.d.). Motivational Force (MF) assumes that individuals develop a motivational force for each behavioral alternative under consideration. The alternative with the highest moti-

vation force is the behavior the individual will choose to exhibit. There are three components that are combined by the individual to create a motivational force calculation.

Expectancy, or the belief that one's effort will lead to a desired performance, is a portion of the calculation. Individuals create a probable estimate of what will happen if they were to increase or decrease their amount of effort. Instrumentality, the second part of the calculation, is the belief that high performance will lead to greater rewards. Individuals must see the difference in the outcome based on how much effort they put into exhibiting the behavior. The final component is valence. Valence is a function of an individual's values, and the individual's preference for each of the potential outcomes (Schmidt & Scholl, 2002).

$$\text{Motivational Force (MF)} = \text{Expectancy} * \text{Instrumentality} * \text{Valence}$$

The Motivational Force formula attempts to depict by the multiplicative relationship that if any component is zero, then the motivational force will be zero. The Expectancy and Instrumentality components are cognitions or understandings individuals have and change based on experience. These cognitions are perceptions by the individual of what she believes will happen. If an individual believes she will succeed and receive a high rating (Expectancy), that high rating will lead to increased rewards (Instrumentality), and the individual then has placed value on the potential outcome (Valence), the individual may start out highly motivated. However, if, for example, one component is missing, and the individual receives a low performance rating, their Instrumentality perception will decline and lead to a decreased motivational force (Schmidt & Scholl, 2002).

From my perspective, the Expectancy Theory is not complete because it is based on the assumption that the majority of individuals perceive a high correlation between performance and extrinsic rewards. This theory is limiting, given that rewards are not always tied to performance. As Daniel Pink explores in his discussion *Drive*, monetary rewards often do not work. The more complicated the task, the more often the reward system does not work in the "if you do this, you get that" structure (Pink, 2010). Other related parameters, such as enjoyment or the value an individual feels when he applies himself, should also be considered in order to apply this theory to people of differing ages, beliefs and value systems.

Decisional Balance & Goal Setting Theories

The Decisional Balance theory is built on a decision-making framework that helps ex-

plain individual behavior. Essentially, the individual creates a balance sheet that helps in choosing behavioral alternatives. The individual uses this theory to evaluate the pros and cons associated with each decision. The pros and cons are evaluated with respect to four different expected outcomes: instrumental gains for self, instrumental gains of others, approval from others, and self-approval (Schmidt & Scholl, 2002).

The Goal Setting Theory pertains to an individual who develops a set of conscious goals that are the primary focus of her behavior. Similar to the Decisional Balance Theory, individuals make choices among behavioral alternatives. However, in this case, these alternatives are instrumental in achieving goals. The characteristics of the individual's goals affect the individual's motivation to achieve them. When goals have the attributes the individual seeks, it will lead to higher performance levels. Goal Specificity is the first attribute that contributes to the individual's motivation to achieve goals. Specific goals have four characteristics: content or the focus of the goal, measure and how the achievement of the goal is assessed, what level of performance is required for success, and the timeline of when the goal is expected to be met. Goal Difficulty is the second attribute. This refers to the level of difficulty required to achieve the goal. Typically, more difficult goals lead to higher levels of performance. The third attribute is Goal Acceptance, which is the degree to which the individual agrees with the goal. Goal acceptance helps determine what the individual is willing to do to achieve that goal. The last attribute of the Goal Setting Theory is Goal Commitment or the degree to which the attainment of the goal personally benefits the individual (Schmidt & Scholl, 2002).

Control Theory

The Control Theory allows individuals to think of behavior and decision-making as a system of comparisons in communication and control processes. This theory states that individuals develop expectations, plan and execute actions, receive feedback and then compare feedback to their expectations to adjust their behavior to be more in line with the feedback received. The theory is built on the assumption that a feedback loop exists, consisting of four elements. First is the Referent Standard, or the standard for evaluating the results of behavior. Secondly, the Sensor is the monitoring element. The third element, the Comparator, compares the sensor reading to the referent standard. Finally, the Effector is the element that is capable of bringing about change in the sensor reading. This theory acts to help individuals determine their current state in reach-

ing a particular goal and determine if additional effort is required in order to meet the goal.

The Control Theory is similar to the Goal Setting Theory in that goals are set and planned for, but differs given that Control Theory allows for adjustment of the individual's behavior based on feedback. I think the adjustment of one's expectations is imperative to reaching a goal. When innovating, it can be important to fail early and fail often and make adjustments as progress is made. People tend to work harder if they can track their progress and are then aware of what needs to be done in order to complete their goal.

The Goal Setting and Control Theories seem to come very close to addressing how to incentivize an individual to become more innovative. If a leader aids the employee in setting clear and challenging goals the employee values and agrees with, this will help the employee to become committed to achieving the goal. As Dan Pink mentions in *Drive*, people need to be able to work autonomously, have the ability to master the skill, and this, in turn, will give employees a sense of purpose (Pink D., 2009). The Control Theory functions similarly in allowing the individual to work autonomously towards mastering the skill and is likely to give the employee a sense of purpose in his work. The Control Theory also allows for the individual to adjust his expectations as he progresses towards the goal. This allows the employee flexibility in pursuing his goals and allows for adjustment to change expectations as he continues working towards a goal.

Behavioral Theories

The next set of theories a leader might use to motivate his or her followers are the Behavioral Theories. They are based on two fundamental concepts: Types of Reinforcement and Reinforcement Schedules. There are four fundamental types of reinforcement. Positive and negative reinforcement act to encourage desired behavior, while punishment and extinction act to reduce the probability of existing behavioral patterns. These four types of reinforcement can be applied naturally or be socially applied. The natural application occurs when conditions in the environment reinforce the behavior without human interaction, while social application occurs when another individual attempts to modify an individual's behavior by controlling the type of reinforcement and reinforcing the schedule.

Positive reinforcement is often externally bound for example, the individual receives a reward, verbal praise or public recognition. Positive reinforcement increases the likelihood that the exhibited behavior will occur again by following this behavior with a positive reward. Nega-

tive Reinforcement acts in much the same way except the undesirable consequence is removed as a result of the behavior. This can often be related to stressful situations, in which preparation or exercise may help ease or remove the stress. If the stress has been eased, the behavior used to reduce the stress is more likely to be reinforced. Punishment decreases the likelihood of exhibited behaviors by following these behaviors with undesirable consequences. Lastly, extinction acts to reduce the likelihood that a given behavior will occur by eliminating the positive reinforcement that is motivating that behavior. In order for a behavior pattern to be maintained, it must be reinforced. Removing the source of the reinforcement, for example, by removing positive reinforcement, will lead to the elimination of the behavioral pattern (Schmidt & Scholl, 2002).

The primary discrepancy I see in these behavioral theories is they center primarily on the individual and extrinsic rewards. The theory does not explore the relationships one develops with others and the impact others' roles, especially leaders, play in the way individuals perceive themselves and how this impacts their sense of being in the world. These theories seem to lack the emotional intelligence to recognize and examine the important aspects of how individuals interact with others and their world.

Social Learning Theory

The Social Learning Theory helps to address the relationship individuals create with others. This theory recognizes the role of alternative learning that occurs during the development of an individual's behavior. It acknowledges that individuals may develop associations between their behavior and the outcomes of their behavior by observing the effects of behaviors exhibited by others. This theory helps link the behavioral and cognitive theories of motivation. It recognizes that simple reinforcement patterns account for some behavior patterns, but much of how individuals act is derived through the observation of others' behavior (Schmidt & Scholl, 2002).

The Social Learning Theory explores the importance of personal development that occurs while observing others' interactions and actions within their world. I think this theory is an important one, in that it examines how individuals change and grow based on what they have learned from others. The intent of this theory may not have been to explore this, but the theory also appears to take into account the impact culture has on an individual. Each culture has different criteria as to what is morally correct or a social 'norm', and it is important to recognize that much of what we learn is directly correlated to who we are surrounded by and the environment

in which we live.

Affective Approach

“Emotions guide, enrich and ennoble life; they provide meaning to everyday existence; they render the valuation placed on life and property” (Cacioppo, 2004, para.4). Given the importance many scholars believe emotions play in the role of motivating an individual and the fact that emotions are recognized for the critical role they play in higher forms of human experience (Cacioppo, 2004), I think the Affective Approach deserves further exploration. This theory explores the effect of the individual’s emotional state on her behavior. The approach is based on three assumptions:

- Individual behavior can be explained by an individual’s emotional state:
- The individual strives to achieve a positive emotional state and avoids a negative emotional state:
- The behavior is an irrational response to an emotional reaction, in which the individual typically does not consider the consequences of his actions.

The basic argument of this approach is that people move in and among three Affective States; positive affective state (individual experiences positive feelings), neutral affective state (individual experiences little or no feelings), and the negative affective state (individual is experiencing negative feelings). The second argument is that individuals develop somatic markers, or emotional memories they associate with people, events and objects that become a part of their experiences. These somatic markers form the basic affective attitude associated with these experiences. From these arguments we can postulate a number of things. Behavior can be energized when individuals experience negative reinforcement. An individual is likely to change her behavior in order to eliminate negative feelings. The act of directing a behavior is often derived from a past experience, or the somatic marker, from the individual in the past. Whether the experience was negative or positive will impact the direction of the behavior. Finally, positive reinforcement aids in stabilizing a behavioral pattern. People generally tend to continue an activity or behavior if they are experiencing a positive affective state (Schmidt & Scholl, 2002).

Emotional Intelligence Model

The Emotional Intelligence Model refers to how individuals respond to emotions with behavioral responses. It describes an “ability, capacity, skill, or self-perceived ability to identify,

assess and manage the emotions of one's self, others, and of groups" (Serrat, 2009). The Emotional Intelligence Model contains principles that provide a new way to understand and assess the behaviors, management styles, attitudes and interpersonal skills, and finally, the potential of people (Serrat, 2009, p. 1). The trigger event is typically the situation or context the individual encounters, the feeling evoked by the trigger is the emotional response, and the behavioral response is the actual behavior exhibited by the individual (which can also be no change in behavior). Emotional Intelligence Skills refer to an individual's skills and competencies that allow the individual to deal with his emotions on both the Individual Level and the Interpersonal Level (Schmidt & Scholl, 2002).

The Individual Level refers to how individuals experience situations and how they monitor, control or regulate their response. Awareness is essential to managing an individual's emotions under this theory's assumption. The Emotional Intelligence Theory states that one must understand her own emotions and the causes of these emotions, become aware of triggers and develop one's tolerance to frustration in order to manage those emotions. The theory also states that individuals must strengthen their self-perception and reduce dependence on receiving external validation from others. Another characteristic of managing emotions is learning how to interpret the meaning of the individual's actions in terms of his own self-concept. The ability to create a positive emotional state will then lead to the development of a positive outlook. Motivation directly relates to the individual's emotional state by controlling behavioral effects of a negative or positive emotional state (Schmidt & Scholl, 2002).

The Interpersonal Level is the way in which individuals influence the emotions and behaviors of others, also known as social skills. Empathy plays a large role in the way individuals influence others or have the power to cause an effect in indirect or intangible ways on others (Influence, 1500). Empathy is defined as "the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experiences of another of either the past or present without having the feelings, thoughts, and experience fully communicated in an objectively explicit manner" (Empathy, 1853). The ability to use social skills and empathy are important in relating on the interpersonal level.

It is easy to see that emotions are directly tied to motivation, since they have a strong impact on how we respond to differing situations. Where we are at emotionally- having positive, neutral or negative feelings- will impact how we behave in different situations. I think how we

feel about or perceive ourselves has a large impact on our motivation as well. I have found that if I have positive feelings towards a goal or I feel as though I am capable of achieving the goal based on past experience, I feel more motivated. This works both ways, so if I have negative feelings about achieving a goal, I tend to be more likely to lose motivation.

Motivation is a concept that is difficult to clearly define given it is ever-changing based on an individual's culture, environment, situation, personal development and emotional state. This knowledge of the variety of ways that individuals may be motivated can help leaders and team members to identify how they might better support individuals to strive towards creativity and innovative mindsets. In order to motivate effectively leaders should aim to provide challenging work that the individual values, strong leadership, clear direction while providing autonomy, resources and a supportive environment. With this leadership, employees will be more likely to seek out innovative opportunities.

In this chapter, I have reviewed the many approaches and theories that may motivate individuals, questioned whether intrinsic or extrinsic factors are more likely to motivate, explored several motivational theories, analyzed the impact emotions have on an individual and investigated the sources and types of motivation that may help an individual strive towards innovation. This knowledge allows us to understand the role of the follower. I have also alluded to the role motivation plays for leaders, but the next section will more closely examine the role of the leader in the leader-follower relationship.

Role of Innovation and Impact of Leaders

Innovation comes, in large part, from workers who work closely on particular aspects of projects or are the experts in a particular area of work. These workers have expertise in certain areas in their departments and have the ability to see opportunities to improve products and processes. Employees who work most closely on particular projects can typically see where the opportunities for creativity and innovation lie, as they tend to have the most knowledge on the matter. For employees to innovate, management must be able to support their employees in order for them to pursue innovative ideas. Management “enables man for the first time to render productive people at different skills and knowledge working together in an organization” (Drucker, 1993, p. 31).

Leaders play a very important role in innovation because they serve as a source of influ-

ence and they help define goals for their employees. Leaders can help facilitate the creative process or they have the ability to hinder it, based on their leadership styles and leadership characteristics. Leaders also influence how a follower will go about achieving goals, so it is important for the leader to provide the support and resources the employee needs to be innovative. This may be by providing the employee with the tools needed, or the ability to ask critical questions to continue engaging and supporting the innovation goal or by providing an environment where the individual feels he or she can be creative. A piece of creating an innovative environment is allowing the employee to innovate without fear of the organizational hierarchy getting in the way. Leaders must be prepared to communicate with the correct stakeholders at the appropriate times during the innovation process and ensure that the employee has the ability to be autonomous and creative. The leader must also prepare the appropriate stakeholders to provide feedback at the appropriate parts of the creative process.

Dong I. Jung (2010), from San Diego State University supports this, stating, "... the creation of an organizational environment where creativity can be fostered may be a better strategy to induce innovation in an organization" (Jung, p. 186). Much research has been done as to which management style is most effective in a variety of settings and situations. While there are many leadership theories, this next section will evaluate leadership styles and characteristics that ineffectively and effectively support creativity and innovation in organizations.

Transactional versus Transformational Theories

One of the many approaches to leadership is the transactional leadership style. This style is contingent on the employee completing work: in turn, the leader will provide a reward for the work completed. This leadership style is based on formal authority and the main goal is for the follower to obey the instructions of the leader. This style plays on the employee self-interests, as the employee expects rewards or punishments based on his or her performance. The exchange is expected by the employee and causes a transactional relationship primarily focused on extrinsic rewards (rewards external to the employee such as money or social status). This style manages by exception; the manager tends to only take action when things are not going as planned (Muller & Turner, 2006, p. 51). The leader will intervene only when the performance of the employee deviates from the standard initially set by the leader. This form of leadership does not allow for the employee to ask questions or participate in the decision-making process, allowing for

little creativity and innovation. The transactional leadership style is based on a give (work) and take (reward) relationship, leaving few chances for the employee to see opportunity to develop a more innovative or creative process for the work. Dong I. Jung (2010) supports my assessment of this leadership style as he states in the *Creativity Research Journal* “followers are extrinsically motivated to perform their job under the transactional leader, which may hold creativity at a minimal level” (Jung, 2010, p. 188).

In contrast to the transactional style, the transformational leadership style provides these opportunities for creativity and innovation. This style of leadership is primarily focused on people or the employee versus focusing purely on the project or task at hand. Transformational leadership is based on the assumption that the leader has a vision for the employee or team, treats them with respect and trust, provides inspiration and motivates employees by developing high expectations in order to help employees be successful. Transformational leaders also give followers personal attention and provide intellectual stimulation by challenging followers with new ideas and approaches (Muller & Turner, 2006, p. 51).

As Dong Jung states, social intelligence is a key aspect to being a strong leader. Jung asserts that the transformational leader tends to take a “democratic, considerate, and participative” approach and “involves active and emotional relationships with leaders and followers” (Jung, 2010, p. 187). Social intelligence strongly impacts how the leader will interact with employees, and this often leads to a more open approach to the discussion of ideas. This may impact employees’ willingness to try new things as they typically feel supported by their leader and have developed a relationship of trust with one another.

Numerous studies have discussed the importance of having a clearly stated goal in order to get employee support for an initiative. The transformational leadership style allows leaders to express the importance of the desired goal, giving the leader and employee greater odds of achieving it. As Jung discusses, this leadership style allows the followers to align their values with the leader, if they choose, which helps heighten the level of intrinsic motivation (individual’s internal drive to do something, which is not based on external rewards) of the follower (Jung, 2010).

Transformational leaders stimulate their employees intellectually. They may do so by asking pointed questions to further develop the thought process, by hosting collaborative brainstorm sessions or by bringing the right people from a variety of areas of expertise into the discus-

sion to brainstorm ideas. A key attribute to this leadership style is that it encourages followers to question their own values and beliefs and also allows them to question their leader's beliefs and values. This may help motivate the leader's followers to think about old problems in new ways (Jung, 2010). A great contributor to the success of this style of leadership is allowing the employee to minimize his or her fear of failure by having the ability to ask questions. The leader develops a platform in which the employee can feel comfortable enough to ask questions and get feedback from the leader as well as others, which further eliminates the fear of failure. I have personally experienced this form of leadership and I can attest to the fact that having this open platform to discuss ideas without fearing failure helped me to be more productive and see greater success in my role.

Failure can often be transformed into innovation, and if leaders give employees the opportunity to try to innovate without fearing failure, they are likely to find more innovative opportunities. As Jung (1999) maintains, "creative solutions can be achieved when organizations encourage individuals to try out different approaches that depart from the status quo without necessarily worrying about being punished for negative outcomes" (Jung, p. 186). Employees and leaders can benefit from not fearing risk and failure, especially when evaluating innovative opportunities. It is important for both leaders and employees to remember, "failure should always be considered a symptom of an innovative opportunity" (Drucker, 1993, p. 49).

Shared Leadership

A leadership style that is gaining more traction in organizations is shared leadership. This leadership style levels the playing field for a set of individuals and provides the opportunity for employees to share the leadership role among themselves. Companies like Zappos, the online retailer that employs more than 1,500 people, rolled out a similar holacracy corporate structure in 2013. This structure removes all titles and hierarchy and places responsibilities on the people to carry out specific roles (Groth, 2013).

The shared leadership style acknowledges that one person cannot contain all the knowledge and skill sets needed at any given time and instead brings together many people to create more cross-functional teams at many levels of expertise. The cross-functional team is not managed by position of authority but "by individuals' knowledge sets and consequent abilities to influence peers" (Pearce, Manz & Sims, 2009, p. 235). This style is important especially given

the rate in which organizations are expected to move in today's environment. Organizations are required to make quick decisions, and sharing this responsibility across experts from cross-functional teams allows the right people with the right skill sets to make the decisions. This style allows for more creative thinking given there is more interaction among employees. It also allows for diversity in thought processes, potentially leading to more innovative ideas. This free flowing leadership style may also help decrease the fear of failure since responsibility is dispersed among many, potentially leading to more creative and forward-thinking ideas. Michael Kocolowski (2010), from Regent University, suggests the shared leadership model may lead to the empowerment of employees, allowing for more creative ideas to flow (Kocolowski, p. 27).

Autocratic Leadership

In direct contrast to the shared leadership style is the autocratic leadership style. The leader implementing this type of leadership generally has a strong voice and tends to push his or her ideas in a group discussion. The leader does not allow for much discussion among the group and does not allow employees to be a part of the decision-making process. This causes employees to feel as though they are not respected and often feel the leader does not value their opinion and values. Employees tend to see this type of leader in a negative light, often causing a lack of motivation to reach the leader's goals. David De Cremer conducted a study and operationalized the autocratic leadership style by "defining it as a leadership style focused on not providing any latitude for the group members to discuss and think about their own ideas" (De Cremer, 2006, p. 82). Given the little discussion that is allowed under this leadership style's authority, it is not difficult to conclude that this leadership style does not support or motivate creativity and innovation from employees. This research also points to the fact that leaders need an emotional connection to the employee in order to conduct a successful leader-employee relationship, as this relationship may help the employee feel more valued and give her the ability to share ideas more freely.

Laissez-Faire Leadership

The laissez-faire leadership style has had mixed reviews over the years. This leadership style acts on the basis that the employee is competent in getting his work done and requires little guidance from the leader. The leader tends to give the follower resources but does not exert power over the employee. This results in little interaction between the leader and the follower.

There is also little direction given from the leader in regard to what the goals and vision of the organization are or what the leader's expectations are. This style also does not allow for a strong relationship to develop between the leader and employee, since the leader typically has a "hands off" approach and is not very involved with the employee at a professional or personal level. Although this leadership style gives employees free reign in making decisions and conducting their work, the laissez-faire leadership style may not be the most effective in supporting creativity and innovation given it does not provide the followers with the vision and goals of the organization or of the leader. This may create broad ideas and creativity with little focus, deterring successful innovations.

Integrative Leadership

The integrative leadership style is gaining prominence in many leadership discussions and research. This leadership style focuses on how the leader leads herself, leads others and leads an organization. This approach develops the "physical, mental, emotional, and spiritual intelligences, personally, interpersonally and organizationally" (Hatala, 2005, p. 6). This leadership style challenges the leader to bring together the transaction, transformational and holistic processes together to develop a more meaningful leadership style. The focus on the mind and body tends to filter into all aspects of the leader, both personally and professionally.

Although this leadership style focuses on the leader at a personal level it also focuses on the follower as well. This style allows for conversation between the leader and follower, giving both parties a chance to share ideas and reflect on where they are now and where they want to be. This essentially develops a vision for both the leader and the follower. This style fosters collective action and brings together people and resources creating more collaborative ideas, particularly to solve problems. An interesting characteristic of the leader under this style is that when the leader is faced with opposing ideas he or she will not choose between the two ideas but instead use the two ideas to develop a better answer. This formula of merging two disparate ideas into one can be the basis of innovation. This style may produce greater innovative and creative results given the opportunity to share ideas. A relationship and conversation between the leader and follower also helps support creativity and innovation.

Leadership Characteristics that Support Creativity and Innovation

This section has discussed a variety of leadership styles and uncovered what types of styles support and hinder creativity and innovation. It is apparent that leadership styles like transactional, autocratic and laissez-faire tend to restrain creativity and innovation, since the styles do not provide employees with organizational or leader visions, allow for conversations between leader and follower and do not allow the employee to be a part of the decision-making process. Leadership styles like transformational, shared and integrative styles tend to support creativity and innovation since these styles provide employees with a vision, support asking questions and conversations between leader and follower and encourage diverse ideas. This research indicates there is not a sole leadership style that supports innovation, but rather several. There are common characteristics that leaders possess in these successful styles, which we will examine next.

Innovation Leadership Characteristics

Many studies have been conducted that examine the impact the emotional intelligence of a leader has on the effectiveness of her management style. As discussed previously, emotional intelligence skills refer to an individual's skills and competencies that allow the individual to deal with his or her emotions on both the individual and the interpersonal level (Schmidt & Scholl, 2002). The individual level is important where leadership is concerned, since this directly correlates to how a leader may react in certain situations. Leaders with strong emotional intelligence skills at the individual level tend to have strong self-concepts causing them to need little external validation in the form of rewards or praise, essentially leading to strong self-perceptions of themselves. This impacts leaders ability to lead given they are comfortable and confident in how they are perceived by others. This gives them a better ability to lead in accordance with their values and goals. It is imperative to recognize that in order for the leader and follower to have a productive relationship, both leader and follower must have relatively high levels of emotional intelligence. The emotional intelligence of both the leader and follower are predictors of how they interact with others at the interpersonal level.

The interpersonal level is the level at which an individual, or the leader or follower, impact the emotions of others. Understanding and managing through social processes or having relatively strong social skills is an important characteristic for leaders. This requires the leader to have a certain amount of social intelligence or the "ability to understand one's own and others'

feelings, thoughts, and behaviors in interpersonal situations and to act appropriately” (as cited in Matthew, 2009, p. 4). Social intelligence often helps a leader to navigate through conversations in which an employee is upset or to perceive how an employee is feeling so the leader can approach the employee to give the employee more support.

A key component to interacting on the interpersonal level is the ability to empathize with others. As previously stated, empathy is defined as “the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experiences of another of either the past or present without having the feelings, thoughts, and experience fully communicated in an objectively explicit manner” (Merriam-Webster Dictionary). This emphasizes the importance of the leader-employee relationship. In order for leaders to be effective and manage tough situations, leaders should make efforts to get to know employees on a personal level. Doing so will help leaders support the individual in a more personal way and may help them discover what motivates the employee, given they have the ability to see things through the employee’s eyes. This relationship will help determine the kind of leadership style that works most effectively for the employee-employer relationship, especially if the leader speaks to the employee candidly about what leadership style works best for the employee.

A leader should develop an environment where the employee feels able to take risks and does not fear failure. This type of environment will allow employees to feel comfortable bringing up new ideas and not fear losing their jobs if their creative ideas are not successful. The “climate” the leader develops consists of six key factors developed by Abraham McClelland that influence an organization’s work environment. McClelland identified these as:

Its flexibility- that is how free employees feel to innovate unencumbered by red tape, their sense of responsibility to the organization, the level of standards that people set; the sense of accuracy about performance feedback, and aptness of rewards; the clarity people have about mission and values; and finally, the level of commitment to a common purpose (Goleman, 2000,p. 81).

In evaluating these factors, it is easy to see that the leader has strong input in how the employee feels and operates in his or her work environment. The leader must set specific standards, give candid feedback about employee performance along with the rewards given for meeting those standards. He or she must also provide employees with a clear idea of what the organization’s mission and values are, as well as giving employees a clear vision of the common purpose for the leader and organization. This will impact the level of commitment employees bring to

their role and will ultimately impact how creative and innovative employees will be in their roles.

Giving employees an open forum to discuss new ideas is another key attribute to developing an environment in which ideas thrive. This allows for the dissemination of new ideas and allows employees to discuss and potentially add to one another's ideas. Innovation is often developed by bringing together two disparate ideas, and by allowing employees to have conversations about their ideas that could lead to more innovative ideas overall.

A strong leader will give employees a clear vision and expectations. The leader then creates a context for employees and from there employees can develop a course that suits their work style in order to accomplish these goals. In order to motivate the employee, the leader must understand what motivates each of her employees. Research shows that intrinsic rewards (such as value, personal goal attainment, sense of worth) tend to motivate employees to be creative. Employees who are motivated by intrinsic rewards often feel a need for achievement. Leaders should recognize that their employees will often be intrinsically motivated and should develop opportunities to ensure employees feel valued and are able to meet their goals.

The primary component that shared, transformational and integrative leadership styles possess is the focus on the employee-leader relationship. If the leader has social ability, has the ability to empathize and allows for open communication, it is likely the employee will feel supported in taking risks and help with decision-making. This ultimately leads to more creativity and innovation.

This section demonstrates that leadership practices that support creativity and innovation do not exist under just one leadership style. There are many components and characteristics of leadership that help support employees' creativity and innovation. A leader with the best results in supporting creativity and innovation will have the ability to seamlessly use many of these characteristics based on the follower's needs. Leaders may use one style more often with one employee and a different style more often with another employee, but strong leaders possess the ability to move in and out of different styles and use different leadership practices based on the person they are leading and the situation they are in. In order to be successful at supporting creativity and innovation the leader must obtain the ability to move between several leadership styles and this requires an awareness of what leadership styles exist and the practices that most effectively support leadership and innovation.

Leadership Theories and Characteristics

	Motivate by Extrinsic Rewards	Motivate by Intrinsic Rewards	Based on Formal Authority	Allows Employee to be a part of decision- making	Supports Innovation/ Creativity	Focuses on Task
Transactional Leadership	x		x			x
Transformational Leadership		x		x	x	
Shared Leadership					x	
Autocratic Leadership			x			x
Laissez-Faire				x		
Integrative Leadership				x	x	

Focuses on people	Provides Intellectual Stimulation	Accounts for values of follower	Fear of failure present for employees	Supports Cross-Functional Teams	Allows for Creative Thinking	Empowers employees	Leader Provides Direction
			X				X
X	X	X			X	X	X
X	X			X	X	X	
			X				X
					X		
X	X	X		X	X	X	X

Chapter 3

Physical Space: Building the Framework for Creativity & Innovation

If we think of an organization as a fish tank, many efforts to improve enterprises focus on the fish and ignore the water. The true power of change resides in the water, the environment in which the fish live. The water is the context.
-Chris Turner

The way knowledge workers function in their workspace has changed. Employees are seeking more flexibility in their workspace in order to be creative and produce innovative outcomes. Organizations are also being forced to change given the volatile market and global competition. Both employees and organizations must be agile and must have an office space that supports these changes.

Employees, especially millennials or Generation Yers, the generation born after 1975, are making the shift to recognizing that they are seeking more value in their work, recognition for their contributions, social contact and the opportunity to create a more meaningful personal life by having more flexibility and balance between their work and personal life (Earle, 2003). Much of this value can be derived from the ability to have the freedom to be creative and be able to develop innovative outcomes. On the employer side, organizations are in need of innovative ideas in order to stay competitive in an ever-changing marketplace.

The Global Chief Executive Officer (CEO) Survey conducted by IBM on 1,500 CEOs found 69 percent of CEOs anticipate greater complexity in the market in the future and 60 percent of that same group indicated that creativity is the way to defy it (Springer, n.d.). Employees have shifted from long days at the office utilizing one particular skill set with a left-brain (analytical, logical) focus to days spent working in a variety of different roles on multiple projects, utilizing a mix of left and right brain skills from a variety of different office environments (inventiveness, empathy, meaning) (Pink, 2005).

Technology capabilities are also changing how communication occurs inside and outside of the office. Some jobs can be done well working alone away from the office at home in pajamas, while others require close collaboration with team members. In order to stay competitive in the marketplace and retain talent, organizations must offer employees an attractive work environment that allows for flexibility, while giving them freedom and supporting creativity and innovation.

The office environment sets the stage for intentional collaboration-increased creativity and the development of innovative ideas and products that can help further support an organization's mission while adding value to employees' work. I think evaluating how the office environment can be reconsidered to be more human-centered will help support creativity and innovation in employees and organizations. Physical space is the framework for innovation and creativity. It helps to create the environment that allows for open communication and allows for the free flow of information. Space also guides how people move within it, and the way people move in a space impacts interaction among employees. These planned or unplanned interactions may influence the level of creativity or innovation outcomes of teams.

I argue that physical space design, with the goal of total environmental wholeness, or the "wholeness of environment, occasion, and people operating smoothly and effectively as one indivisible unity," (Rengel, 2003, p.322) can better support both employees and organizations. Space nurtures individual and collective creativity and can more effectively motivate, support and further advance creativity and innovation among employees in the office environment. This chapter will employ evidence based design concepts in order to explain which design elements can create a more human-centered office environment that better supports creativity and innovation.

I will begin by examining office spaces from the past, present day office alternatives and finally, the office space of the future. I will also examine how a variety of design elements can create a new and improved office that supports the users and the function of the space. There are many office design elements and many of these may support creativity and innovation, but this chapter will focus primarily on: spatial order, expression, enrichment and modifying elements. I have found these elements can have great impact on how people function in an office space. Some design elements can impact creativity and innovation just by making simple changes to a space, or all of these elements can be utilized to better support creativity and innovation. The key is developing a space that will support the people using the space and the intended function of work.

In order to support employees and organizations in their efforts to be more creative and innovative, organizations must develop work environments that support collaboration, interaction among employees, and provide the tools needed to develop creative ideas. Many organizations have begun to develop open offices to serve this purpose. What many organizations are finding, however, is open offices alone may not be the answer.

Looking Back

The dehumanizing hierarchical Taylorism management structure from the late 1800s to early 1900s, marked career progression and promotion with the space given to each employee. Fredrick W. Taylor developed the principles of “scientific management” which emphasized continuous process efficiency improvement. Taylor used a stopwatch to determine the best time that could be attainable under optimal conditions and performance. Humans were then assigned worth based on efficiencies (Rifkin, 2004). Taylor designed office space that would accommodate as many people as possible fitted into rows. As people progressed in their careers, their successes were marked by office space—a larger desk, then later more space around the desk, with the ultimate goal of a private office (Duffy, 1997) that served as a status symbol to employees.

Taylorism was short-lived, losing prominence in the early 1900s, but the impact this management structure had on office space still lingers. The Veteran Generation (born before 1946) and Baby Boomers (born between 1946 and 1964) have become accustomed to working hard to earn their offices and tend to view their private offices as a status symbol (Stegmeier, 2008). This structure has also encouraged them to become accustomed to working 8am-5pm with little flexibility in their schedules. As leadership has evolved to provide more flexibility to employees and less hierarchy, the office space design must also change to accommodate this progression. John Kotter, Harvard Business School’s expert on leadership, believes organizations “need to combine strong leadership (defined, interestingly enough, as the ability to create a changing environment) and strong management to cope with complexity”(Duffy, 1997, p. 51).

Organizations are now working to accommodate four generations in the workplace, with Millennials quickly becoming a large percentage of the workforce. The diversity of the workforce can cause issues, as each generation seemingly has different goals. Millennials have watched their parents work long hours and now have a different view of work and are seeking more flexibility. Millennials and Baby Boomers alike are now seeking work that is engaging and important and opportunities to make an impact with future growth potential (Stegmeier, 2008). Sixty-four percent of U.S. employees are happier with their jobs today than they were two years ago because of the increased flexibility and shift towards a clearer work/life balance (Dishman, 2013).

Given the wide age range of employees, it is difficult to accommodate the needs of all members of an organization, which is why a flexible space is important. Technology advance-

ments have improved the way knowledge workers function and communicate, but they also pose a potential detriment to the multigenerational workforce.

Impact of Technology on Communication

The progression of technology has changed the way we communicate. Many argue that there is a paradigm shift occurring: offices are no longer needed since modern technology allows people to work from anywhere. Coffee shops, airports, and restaurants are often just as equipped to suit the needs of employees. Interactions that once occurred face-to-face now occur via electronic communication. As mentioned in Chapter 1, collaboration can occur via platforms like shared Google documents or Asana, and consensus is often reached without any face-to-face communication.

Although technology provides the ability to work anywhere, people are losing human interaction in their work if they only work remotely. The lack of human interaction may impact the value employees feel in their work. This lack of human interaction may also lead to the feelings of uncomfortable isolation and the division of social networks, ultimately impacting employees' work (Zuboff, 1982). This feeling of isolation may impact the level of creativity and innovation employees bring to their work, as well as lowering the employees' level of commitment to the organization.

Technology is also changing the relationship between employee and supervisor. Supervisors now have the ability to see when and how employees are working. Supervisors can view the status of documents and make instant edits and recommendations without ever having a discussion with the employee. These types of interactions are removing the human-centered approach to how communication occurs and can often leave employees feeling like they are being watched but only interacting with a computer, not a person.

Karen Mallia, an independent advertising consultant, researched telecommunication and discovered the loss of regular face-to-face communication has a broad range of effects on organizations and individuals. Mallia found the following:

- Organizational norms are assimilated by observation and modeling:
- Skills and information are learned from observing others and through participation in informal communication networks:
- Informal networks have been shown to improve decision-making:
- Creativity and innovation often flow from communication and collaboration among people in proximity (Mallia, 2000).

The Office of Human Resources (OHR) at the University of Minnesota was facing the challenge of bringing OHR employees together from across the university and creating a better space for employees to complete their work. Previously, employees worked in five different buildings across campus. One of the five offices was particularly an issue, as there were nine-foot-tall cubicle walls, and employees found it difficult to know if anyone was even in the office. Even with advanced technology available, the separation of employees across campus caused delays in response times and left employees waiting up to five days to receive information in order to proceed with a project they were working on. As Mallia found, this office model of employees connecting only via technology can lead to staff feeling isolated and impact creativity and innovation levels.

After completing surveys and discussions with both employees and supervisors, OHR concluded their office structure does not support teamwork. They are currently in the process of bringing OHR employees into one building, knocking down tall cubicle walls, and creating both individual stations and collaborative workstations in a café style office environment. OHR believes the new office space will support teamwork, reduce wait times for responses and better support a multigenerational team.

This example shows that although technology advancements allow for work to get done, it may not be getting done in the most effective way. Another contributor to declining efficiencies is space that is not created for a variety of personality types, attitudes and ways of thinking. OHR's office space is in the process of being redesigned to offer a hoteling option, a quiet zone and more readily available conference rooms for group collaborations.

Introverts and Extrovert

In order to create space that is not only suitable for a multigenerational workforce, the personality and attitudes of individual employees must also be considered in order to create space that is suitable for all. Architects and designers have begun to shift away from creating structures that leave little thought to people, to placing more of a focus on how people will use space. Although this progression has occurred, there still has been little forethought about the different types of people who will use these spaces. A primary consideration for designers should be to create space that accommodates both introverts and extroverts. According to Susan Cain, author of *Quiet: The Power of Introverts in a World That Can't Stop Talking*, introverts make up

one-third to one-half of American society (Goudreau, 2012). This confirms how important it is that office space be conducive for both personality types, especially given many people move in and out of feeling extroverted or introverted on any given day.

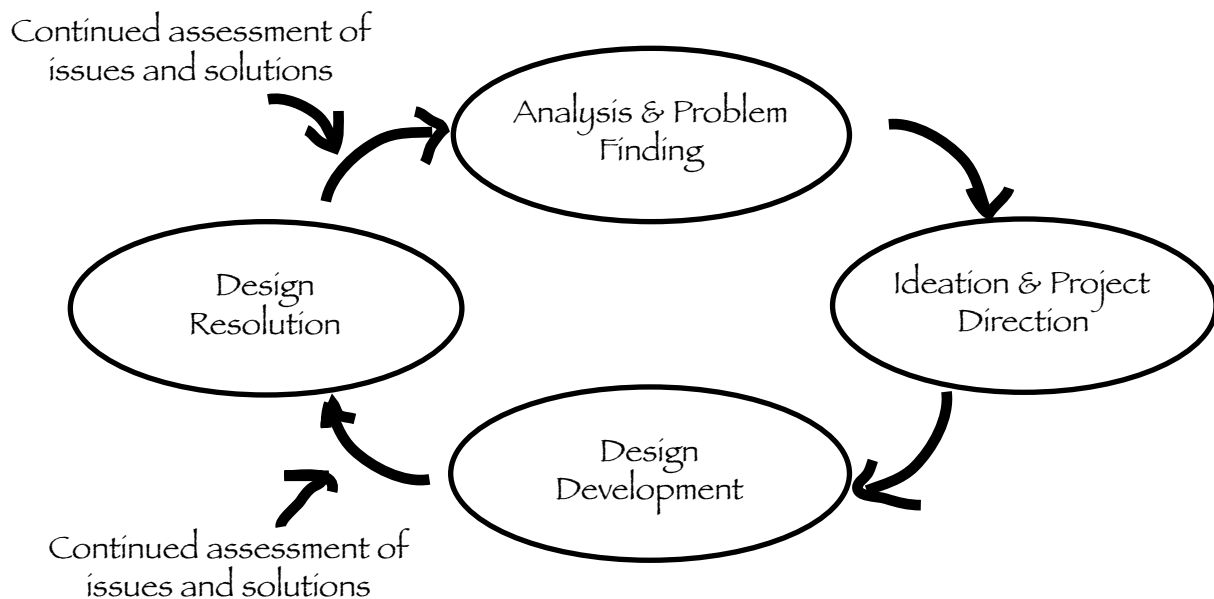
Definitions of introversion and extroversion are often misinterpreted. For the purposes of this study, we will defer to C.S. Jung, the founder of analytical psychology, who suggests that introverts typically receive energy from dealing with pictures and memories inside their heads, prefer to do things alone or with one or two closely trusted people, and prefer to take time to reflect. Extroverts, on the other hand, get energy from involvement with a variety of activities and people, prefer to talk things through out loud and enjoy hearing what others have to say (“Extraversion or introversion,” n.d.). The way in which people best receive energy to do their work must be considered when creating a space that will support all workers.

Considering the differences in how people will function in a space is also imperative before redesigning an office space layout. Office spaces should support open communication along with convergent thinking that typically has one single answer and divergent thinking that leads to an array of possible solutions, often requiring higher levels of creativity (Kaufman, 2012).

In order to accommodate both personality types and ways of thinking, it is important to allow the space to support collaboration, as well as areas for people to reside in quiet reflection or engage in focused work. I think the flexibility in the space should allow both personality types to rejuvenate their energies, as well as allow for office space to support both diverse personalities and work styles. So, how do we create a work environment that is suitable for a variety of generations, personalities and ways of thinking, while maintaining flexibility to suit employees’ needs based on the function of work they need to do? Let’s begin with the design process.

The Design Process

The design process begins with analysis to determine what issues exist while further evaluating the needs of the organization and employees. Using empathy and anthropologists’ skills to examine how people currently use the space will help to determine where improvements can be made. The people who actually use the space will be able to provide designers with the information needed to truly understand where improvements and innovations can be applied. The next step is ideation, helping to determine the direction of the project. The ideation process can inform which type of office spaces might be most suitable for a particular project. Development



is the next step, giving the project unity and direction. It is important to continue to assess the issues and possible solutions to these issues throughout the entire development process. Finally, the project moves to resolution, when the project comes to life via floor plans (Rengel, 2003).

Function

Designers must consider a variety of different factors when evaluating how a space can help support creativity and innovation, especially when using a human-centered approach to design. The key element to defining a space is the function for which the space will be used. In an existing office space, designers can spend time in an anthropologist type role, which can help in understanding how the space is currently being used as well as evaluate ways in which the space can be better created to support the work being done in the space. Considering whether the space should support conversations, prototyping, or independent or collaborative work are important factors to consider before determining the spatial layout. Many organizational leaders view space in its current state, often missing what the space could or should be if the space were to be created based on how to best support employees that use the space.

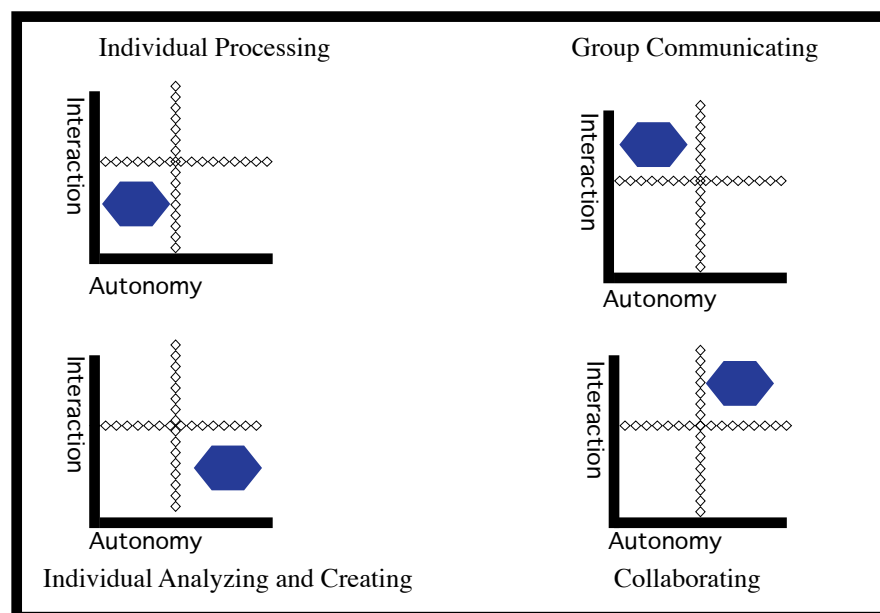
In the office environment, employees will typically use one of four work processes, ultimately impacting how the space should be created to support the work. Roberto J. Rengel examined each of the work processes:

- Individual Processing (low interaction, low autonomy)- this type of work typically entails repetitive tasks completed individually:
- Group Communicating (high interaction, low autonomy)- this type of work requires sharing frequent exchanges of information, while requiring privacy for individual work:
- Individual Analyzing and Creating (low interaction, high autonomy)- this type of work relies on individual left-brain thinking that requires high levels of focused concentration:
- Collaborating (high interaction, high autonomy)- this type of work requires significant amounts of right-brain thinking and is often done with others (Rengel, 2003, p. 64).

As you can see, it is important to create an office environment that suits employees' needs and the intended function of the space. It is also important to note that the interaction between each of the differing office neighborhoods, or team clusters, is important in how people will move and interact throughout the space. Function should be considered in all stages in the design process.

Present Day Alternatives to “The Traditional” Office Space

Given the ever-changing needs of the multigenerational workforce, many organizations are exploring alternative options to the “normal office” (mix of cubicles and private offices) such



Work processes visual inspired from Roberto J. Rengel's *Shaping Interior Space* (2003).

as an open plan or collaborative office spaces. Some organizations are trying to develop a better balance between private and collaborative offices, while others are exploring a variety of other options. The following sections examine some of the most common office design options prominent today.

Hoteling

Hoteling allows employees to use the space of their choice each day within their office, based on the type of work required. Many organizations using this structure provide employees with laptops and employees plug-in to their desired workspace each day. This structure works well for employees who are mobile and require little storage. This structure also works well for employees who may work with a variety of people, which requires them to work closely with different groups of people each day. Hoteling allows employees to move from group to group.

Hoteling is a great option for organizations that have employees that are out in the field or telecommuting frequently. It allows plenty of flexibility for employees to choose where they work based on the function of their work and also cuts office space costs for organizations since vacant office space occurs less frequently.

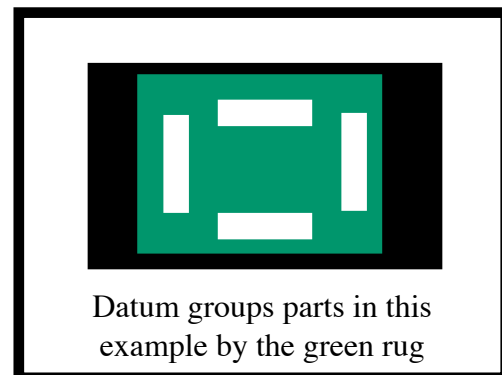
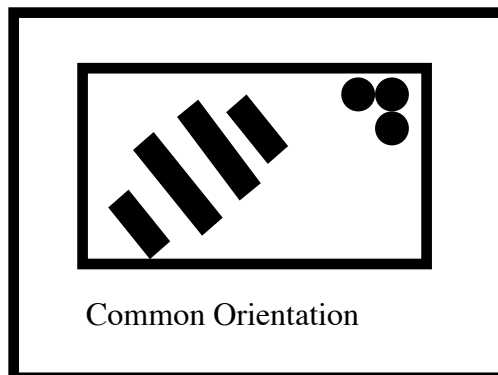
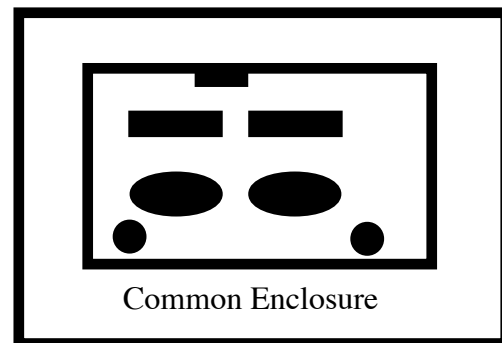
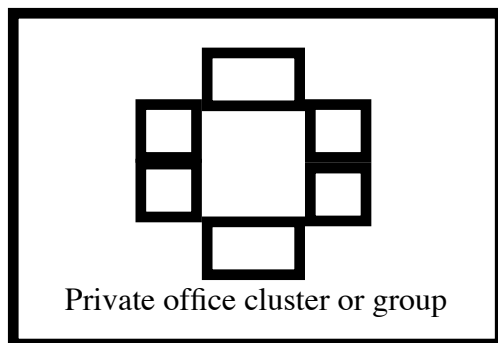
Groupings

Parts and areas within an office space can be grouped together in a variety of different ways. Clustering, or grouped spaces in tightly configured conglomerations, is one option. This can apply to several private offices in very close proximity. Common Enclosure is another potential office layout. It consists of several office sections, desks or furnishings grouped within a common boundary or a room. An example of this could be several cubicles or desks arranged within one room. Common Orientation consists of parts or furniture placed in the same direction. Since they are in close proximity, they would be defined as a group. Once again, desks or cubicles arranged in the same direction can be considered to be a Common Orientation layout (Rengel, 2003).

Datum, another option, groups dissimilar parts through a common ground. This could be an arrangement of desks and chairs along with a lounge area within a common ground. The common ground can be raised flooring or a unique carpet pattern on which the desks are placed (Rengel, 2003).

Visibility maximizes what can be seen in a space and implies openness with strategically placed tall elements that can serve as space dividers (Rengel, 2003). Groupings can be a nice way to help define a space for employees. Groupings can be created to indicate a quiet or collaborative zone, or spaces can be created based on job function. Groupings can also be created to keep teams together or group diverse work groups in a common area. The relationship between groupings is very important in creating the office environment. Clear intersection occurs when joints or seams between areas are visible and clearly articulated, while still separating two adjacent areas. An example of this is separating two groupings with ceiling or floor treatments, short

Groupings



Groupings visual inspired from Roberto J. Rengel's *Shaping Interior Space* (2003).

walls with a transparent top half or strategic furniture arrangements to indicate a new grouping. In the open floor plan, visibility is most apparent.

The common theme among these options is that space is accommodating the needs of the employees. The space is not dictating how the employee must work. As Tom Springer, PhD for Kimball Office states “The greatest benefit of workplace strategy lies in redesigning office workplaces to better support how work gets done” (Springer, n.d., p. 7).

Private Offices

Private offices serve a great purpose when focused, uninterrupted work is required. Private offices also allow for closed-door conversations that require privacy. It is important for designers to evaluate the needs of the employees and organization before designing a layout with private offices. The use of private offices often sends a status signal to other employees and each organization must determine if that status signal is appropriate to its mission and values. Desks in private offices are often placed in a way that separate the office “owner” from the office visitor, implying a hierarchal structure. This division between owner and visitor may cause a power struggle, so the placement of the desk should be carefully considered as desk placement in a private office can greatly impact collaboration.

Coworking Spaces

Coworking offices offer space with little sense of hierarchy. For those who work away from the home base office, tire of telecommuting or are seeking more office interaction with people, coworking spaces are often sought. Coworking spaces are rentable office spaces that allow for diverse interactions by bringing together remote workers, freelancers or entrepreneurs from a variety of different companies, industries or work functions to work in one space. Spaces like Co-Co in Minneapolis and Industrious in Chicago are beginning to pop up more frequently as more and more people are seeking this type of space.

According to Deskmag, an online magazine focused on coworking, the purpose of these office spaces is to create community and collaboration to increase productivity. The 2012 Global Coworking Survey of more than 2,000 respondents found 71 percent of respondents said their creativity had increased since joining a coworking space, and 62 percent said their standard of work had improved.

There has been skepticism of reduced productivity due to distractions in these types of spaces, but the survey found 68 percent of respondents said they were able to focus better, as compared to 12 percent who said the opposite (“1st results of,” 2012). These results show that coworking spaces may be a viable option for many employees, depending on the function of work and the best way each employee works within a space.

Space Design and Communication

When first entering an office space, one can often determine how communication and traffic move just by noticing what is visible. Entering an office with closed doors and cubicle walls stretching from the floor to high off the ground gives one the sense that open communication might not be fully supported. Upon entering an office space with few closed office doors and mid-level walls that are more likely to support regular conversation, one may sense that collaboration is widely supported. This can all be seen upon entry and often assumptions are made upon one’s arrival in a new space. Given that these assumptions are so quickly developed, it is important that the entrance to an office environment, as well as the entire office layout, be in line with the mission and culture of an organization.

Azul 7, a human-centered Minneapolis-based design firm, places a high emphasis on collaboration. Not only is this seen in the organization’s purpose and values, but it is also immediately noticeable upon entering their office space. The office layout is built with collaboration in mind, as the workspace area consists of two long desks shared by approximately fifteen people. Different from hoteling, each employee has her own workspace at the table. This open layout supports conversations with the whole table cluster or the table cluster next to it, as well as smaller conversations with those sitting near each individual.

The “flow model,” a communication model that Azul 7 is using, is organized by placing people who need to communicate regularly in close proximity to each other (Peponis, Bafna, Bajaj, Congdon, Rashid, Warmels, Zhang & Zhang, 2007). Although Azul 7 has a relatively small staff, the space design offers ample opportunity to interact with team members who may not typically work together. The office layout supports the serendipitous communication model and provides informal interaction nodes, such as the kitchen or living room area, which helps bring people outside of their normal work environment to interact. This design allows for more unpredictable interaction (Peponis, Bafna, Bajaj, Congdon, Rashid, Warmels, Zhang, Zhang, 2007).

As Leon Festinger and his colleagues found, physical space is the key to friendship formation. Their research found “it wasn’t so much that people with similar attitudes became friends, but rather that people who passed each other during the day tended to become friends and later adopted similar attitudes” (Alter, n.d., para. 2). These unplanned interactions may help form friendships, spark discussions about current projects they are working on and may allow for the spread of ideas from one project to another. Steve Jobs used this strategy in designing Pixar’s headquarters in California, in order to support spontaneous interaction among employees. The space was designed to encourage mingling, meeting new people and communicating. The open plan design created a better flow of communication and increased spontaneous encounters to further support collaboration among employees (Elmer-DeWitt, 2014).

In larger organizations, providing distant workstations for team members who actually work closely may help create more communication within the space. This design can act as a mechanism that allows others to view ongoing work that may not be linked to one’s own work. This distance, with the ability to view others work, may ignite creative ideas (Peponis, Bafna, Bajaj, Congdon, Rashid, Warmels, Zhang & Zhang, 2007). Charlie Miller, a faculty member at the University of Minnesota, says “the basis of good design is that you need to plan for intentional experiences but leave room for unintentional ones, for creating the unexpected” (“Creating smart space,” 2013).

Considering how team members will work best in these different communication models will help inform which collaborative model is most suitable for teams. The design process can help determine which office type will be most effective, and then lead to using the appropriate

	Supports Introverts	Supports Extroverts	Supports Collaboration	Allows for Flexibility	Balances Noise Levels	Supports Function of Work	Allow for Private Conversations
Hoteling		X	X	X		X	
Groupings	X	X	X	X	X	X	
Private Offices	X	X			X	X	X
Coworking Spaces	X	X	X	X	X	X	X
Open work space		X	X	X		X	



Azul 7, in Minneapolis MN, has a fully collaborative space with magnetic chalkboard walls, whiteboard walls and a full kitchen. The space provides a quiet area in the back of the office for private calls, as well as a conference room for group meetings.

communication model. Order, expression and enrichment can help shape how an office space can begin to create an inspiring space for the user.

Order, Expression and Enrichment of Office Spaces

Destination Paths

Many pay little attention to the path taken to get to a destination. The hallways or staircases can often be the forgotten portion of the design plan. Designers must consider how the paths to destinations might become a place for interaction. The walk to the restroom might pass by a node, or a place just off the hallway or walking path, where conversations or short meetings might occur. These nodes can be as simple as a standing table or as elaborate as a small kitchen or meeting room. Providing the opportunity for people passing by to stop and chat will change the way employees interact, often increasing spontaneous interaction.

Stimulation & Stability

In order to develop an office environment that focuses on the people who will utilize the space, we must consider how the office environment will stimulate employees, while stabilizing them to support the work that must be done in the space. What can be seen and heard are primary components of employee stimulation. The level of manipulations applied to a space impacts how people will be stimulated and function within the environment. Making a few basic shifts to the environment via displaying repeated parts, such as a pattern or tiling on the wall, may add a level of interest to the viewer.

In studies of environmental preferences, it has been found that environmental complexity is preferred up to a certain point, depending on the individual. Ornamental features, columns, furnishings, or floor and wall treatments, can add environmental complexity to a space and have been shown to stimulate the brain (Rengel, 2003). Adding novelty to a space is another way to engage the user. Masses of unconventional shapes, such as an unconventionally shaped room-divider wall, or openings and floor elevations can attract the attention of the user.

However, the over-accentuation of novelty can lead to tension in an environment by over-taxing the senses. Providing stability to the user must be considered. A high-load environment, consisting of bright light, loud noises and vibrant colors may be suited for certain environments,

but is often too hard on the senses to be applied in an office environment. If a more peaceful and quiet environment is required for highly concentrated work, a low-load environment with more subdued colors, lighting and noise levels may be more appropriate to provide stability to the user (Rengel, 2003).

Modifying Elements

Modifying elements have been shown to have great impact on how a person may perceive a space upon initial viewing, as well as how an employee who works in the area everyday perceives the space. There are several modifying elements, but I have found that lighting, noise levels, color, furnishings and plants have some of the greatest impacts on how employees may function, ultimately affecting creativity and innovation levels. Modifying one or two of these design elements or revamping all of the elements can have great impact on the users of the space.

Lighting

Lighting can be one of the least expensive design elements that have the greatest impact on employee satisfaction and human performance. Richard Katzev conducted a study in which twenty-four participants worked in a variety of lighting settings for approximately one and half hours for each setting. The study showed people prefer lighting levels between 45 ftc and 55ftc (ftc is the amount of feet one light expands across a surface), versus the typical lighting levels of 100 ftc (Katzev, 1992). Therefore, a simple light-bulb change can impact productivity. Anna Steidle and Lioba Werth, from University of Hohenheim and the University of Stuttgart, conducted six studies to see how dim lighting impacts creativity by assessing the creative performance of participants across a variety of creative tasks. The studies included both priming of participants (for example, participants were told to think about something related to darkness) as well as conducting studies in rooms with a variety of light settings. The research concluded that dim lighting does impact the generation of new ideas, but only when the lighting was dim enough to allow the participant to feel free from constraints (Steidle & Werth, 2013).

I have used dim lighting during marketing brainstorming sessions focused on how we can engage with our target market. I found that dim lighting encouraged the brainstorming group to be more communicative and they produced a greater number of ideas. The group was more apt to speak up than they typically would in brighter light settings.

Natural lighting can also impact the way employees function. Natural lighting often provides more enjoyment for employees as they are able to see sunlight and happenings outside. Sunlight has also been proven to have a positive impact on students. They perform from 7 to 18 percent better on tests when exposed to sunlight according to a Daylighting in Schools study (Whitemyer, 2013). This study can translate to how employees may function better in focused work when they are exposed to natural sunlight. These studies suggest that lighting should be adjustable in order to suit the employee's task at hand. Whether the lighting is set up to accommodate employee preference or be better suited to support creativity is dependent upon the task the employee is working on.

Noise and Interruptions

Noise levels are often one of the most common concerns for people shifting into an open plan or collaborative office space. The debate between productivity and interruption levels in private versus open plan office space has occurred for years. While open plan office space does create the possibility of being interrupted by high noise levels, there are a few ways to alleviate this.

Noise can come from a variety of different activities such as typing, phones ringing, or conversations occurring around workstations. Noise levels change based on the height of the walls in the room. Rooms with lower cubicle walls will have higher noise levels, while walls that reach the ceiling will hinder the spread of sound. Reverberation time is "the amount of time it takes for sound to decay in space" (Rengel, 2003, p. 305). Hard surfaced areas will cause sound to linger for extended times. Areas with soft surfaces including items like upholstered furniture or curtains will help create a sound barrier. The right materials should be used in spaces based on the noise levels that are appropriate for the function of the area.

J. Keranen and V. Hongisto conducted a study to determine the distance that speech reaches within an open plan office. While there are many variables as to how speech will decay within a space based on ceiling height, room shape and furnishings, to name a few, they discovered the distraction distance was approximately one or two workstations away (Keranen & Hongisto, 2013). This is important to note when determining how to best design a space, as noise levels can increase the amount of distractions employees are exposed to.

It is important to evaluate the sound levels that will occur given the design of a space,

especially if there are a variety of people working on different tasks or projects. Using zones to indicate appropriate noise levels is helpful to users. If the areas are zoned, it makes it easier to choose which materials and barrier levels will work best in each area.

Team members interrupting one another by frequently stopping by to ask quick questions or to talk can also become a barrier to productivity in an open office environment. While the purpose of an open office environment is typically to increase collaboration, it is important for work groups to set up guidelines as to how people will function in the space. While some may argue that open plan office space allows others to see via body language whether or not a person is at a point in their work where they can be interrupted, this may not always be apparent. Many organizations have created cues to help alleviate some interruptions. Placing a green (indicating- interrupt me!), yellow (indicating- I'm engaged in focused work) or red (indicating-do not disturb) indicator at each workstation may help alleviate common interruptions and allow people to focus.

Noise levels are common interruptions in both private and open offices. Designers and organizations must determine how to best organize their spaces to support the job function for that particular space and create best practices to allow employees to operate at optimal levels.

Color

The colors used in an office environment are very important as they have a large impact on the mood and emotions of its users. Color can also help to orient people within a space, indicate status, tie to the office's brand and influence objects that are placed within the space.

The U.S. Navy conducted a study in which they shifted from white walls to colored walls in an office space. Three years following the introduction of color to the environment, there was a drop in the occurrence of accidents by 28 percent. This supports another independent study that showed that white or off-white business environments resulted in a 25 percent or more drop in human efficiency (Engelbrecht, 2003). Each color consists of a hue (color pigment) and saturation (intensity of the color). Angela Wright, a world-renowned color psychologist, states that each person will perceive and react to colors differently, ultimately impacting behavior. She also suggests that highly saturated colors are more likely to stimulate while low saturation colors will soothe (Bailey, 2013). Once again, it is important to keep in mind that each person will react differently to color. During office space design, it would be helpful to discuss what color palette

is most appropriate for the people and function of that particular space. Color not only applies to the paint color on walls but also the furnishings and ornaments placed in the space.

The image on the next page explains the impact certain colors have on people. This image can help determine which colors are most suitable for specific spaces based on the intended function of each space.

Furnishings

Furnishings are a key element that contributes to how people will function in the space. Furniture that does not move will impact how people use the space and might be better suited for focused work as stationary furniture can make it more difficult to collaborate. Furniture that is easily movable and flexible will better support collaboration, making it easier for people to gather collectively.

The comfort of the seat will also impact usage. A short collaboration session may be better suited for foam cube seating or a bar stool without back support, which causes people to stand up and collaborate. Activities that require longer stints of time will require more comfortable seating (Doorley & Whitthoft, 2012).

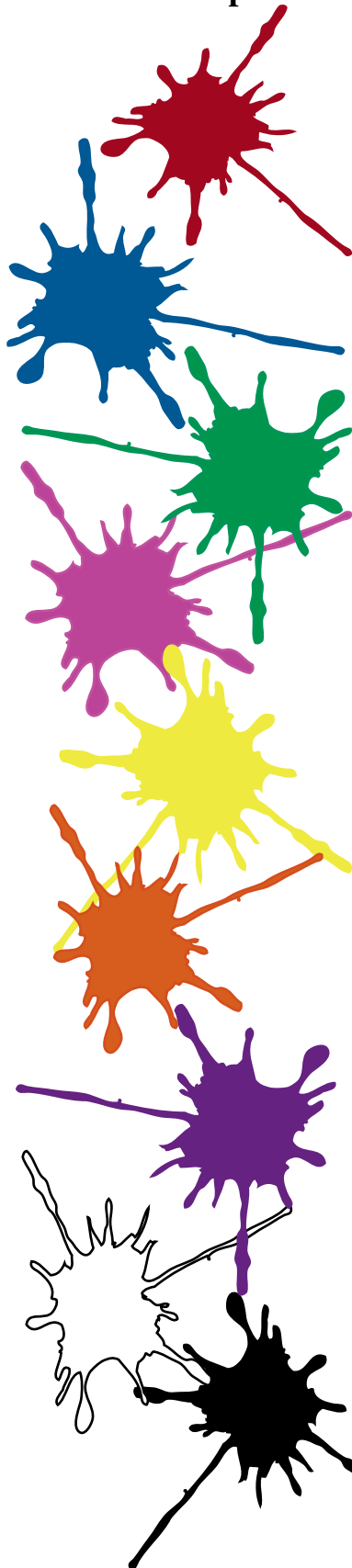
Steelcase, a company that offers a variety of workplace products, created Cobi style seating specifically to support collaboration and promote movement. Steelcase based the design on three insights :

- Chairs should promote movement and be comfortable for long periods of time:
- Adjustments should be automatic and intuitive:
- Chairs should support multiple postures (“Cobi by steelcase,” n.d.).

The chairs are also on wheels so they are easily moveable. Steelcase’s approach to furniture allows designers to easily bring the furniture into the space, as they are created to support collaboration. The furniture arrangements can then vary from individual seating within an office or shift to collaborative work in groups and clusters. Placing seats in circles or horseshoes can help inspire an interactive conversation, while desks and seating in rows better support focused work.

Tables also suggest how the space can be used. A standing table without a chair can serve as a perch along a walkway used for quick conversations, while a round table with chairs can better support a longer collaborative conversation. Coffee shop style with a long, narrow table

Impact of Color on Employees and Office Environment



Red tends to raise blood pressure and suggests energy and excitement.

Blue slows pulse rate and body temperature.

Green has a soothing effect, is restful for the eyes, reduces appetite and represents renewal, youth and vigor.

Pink is calming, linked to happiness, hope and optimism. It causes the brain to release more serotonin creating positive psychological vibes.

Yellow is linked to happiness, hope and optimism. It causes the brain to release more serotonin creating positive psychological vibes. Yellow is also know to stir creativity.

Orange corresponds to the circulation and nervous systems, and therefore has an invigorating effect on the body. Large quantities of orange may irritate eyes, although many perceive it as a happy color that creates energy and warmth.

Purple stimulates brain activity. It is known for elegance, formality and sophistication.

White conveys simplicity and creates space.

Black is typically better used as an accent color, since it is so powerful.

(Bailey, 2013), (Zimmer, 2011) and (Engelbrecht, 2003).

allows people to work alone or together. This type of space allows for focused work as well as collaborative collisions (Doorley & Whitthoft, 2012). In order to best support creativity and innovation, furnishings must be easily adjustable to suit the need for the function of the space.

Plants

Plants are not only attractive in any room but a study conducted on 101 participants by Roger Ulrich, PhD from the Center for Health Systems and Design at Texas A&M University, shows that plants actually impact productivity and problem solving skills.

Ulrich's study found:

- Problem-solving skills, idea generation and creative performance improve substantially in workplace environments that include flowers and plants:
- Both men and women who work in environments with flowers and plants demonstrate more innovative thinking as compared to environments with just sculpture or no decorative objects:
- Men who participated in the study generated 30 percent more ideas when working in environments with flowers and plants than ones without:
- While men generate a greater abundance of ideas, the research shows that women generate more creative, flexible solutions to problems in workplace environments with flowers and plants ("University research shows,"n.d.).

The addition of plants to offices or open plan spaces also help to reduce noise levels with proper placement. This research supports the addition of plants and flowers to any office space.

Making the Change

Having employees' office space redesigned may be scary and unnerving. It is important for the organization's leadership team to consider this in the beginning of the process of developing an innovative office environment. In order to help make the transition easier, it is important to allow team members to collaborate on the project. The designer and leadership team may want to develop a committee of employees at a variety of different levels and skill sets to come together to discuss how they should be using their office space and what changes can help them to use the space based on those goals. Allowing for employee input will not only help to develop an improved space, but may also ease some discomfort in making the shift to a new office environment.

Banco de Credito del Peru, the largest and oldest bank in Peru, successfully went through an office redesign by allowing employees at all levels of the company to have input on the

project. They teamed up with Steelcase Applied Research and Consulting and used a four-step process-- ask, observe, experience and realize-- in order to find an office solution. This process allowed the bank to “improve organizational performance by better leveraging people, process, technology and space” (“Banking on a,” n.d., p. 2).

A critical component to the bank’s success was the ability to define a clear strategy in the initial stages of the project. They created six success factors: a clear corporate strategy, having the best talent, customer focus, operational excellence and innovation, effective communication and information, and organizational collaboration and integration (“Banking on a,” n.d.). These factors were then supported by specific design principles that helped the user experience to be defined in each workspace.

The space is now a mix of one-on-one meeting spaces, collaboration spaces, as well as nodes where people can have impromptu meetings. The first completed project in Lima accommodates 40 percent more people that use 23 percent less space than they did previously. Their research shows the productivity gains could surpass 14 percent (“Banking on a,” n.d.).

Another important aspect of implementing a change of this magnitude is ensuring that the leadership team is not only an advocate for the project idea, but also willing to change the way in which they work. Leaders must “practice what they preach” and if they tell their employees it is important for everyone in the organization to change the way they work, then leadership must also do the same. This shows employees that it is important at all levels of the organization and there are not any exemptions to the change. A clear strategy that supports the organization’s mission and values, along with buy-in from both leadership and employees will help in creating a smooth office transition.

Office Space of the Future

Many people often think of Google’s office spaces when the idea of open plan and collaborative office spaces are discussed. With more than 70 offices in 40 countries (“Google locations,” n.d.), Google has taken modifying space to the extreme and has developed an office space that supports both stimulation and stability, a variety of personality types, offers flexibility in a variety of spaces and settings and offers nodes for people to gather informally. Google offices also typically have exercise facilities and game rooms available for employees to relieve stress and rejuvenate their energies. Many of their offices have food available within approximately

150 feet, offering employees restaurants, cafes and micro-kitchens. Google created these spaces to support casual collision and as Festinger suggests, this can help to form friendships across job functions and departments (Alter, n.d.).

What is most unique about Google's approach to space is that they offer a variety of different spaces, and in most cases, employees get to choose which office space will suit them for their work each day. Their work might require collaboration one day, in which a coffee shop style space or a brainstorming space is most suitable, or they can choose a private space for focused work. The spatial options are part of Google's philosophy of "encouraging a balanced, healthy work environment and enabling as much interaction and communication between the Googlers as possible" ("Inside the epic," 2013, para. 6).

It is important to note that Google has a philosophy about this style of work and all



Google's Dublin office offers an open floor plan with individual workstations, booths and pods for group discussion and open areas with seating for many for collaborative work and brainstorming ("Inside the epic," 2013).



Google's Zurich office offers small pods for focused work. ("Google Zurich offices," 2008).

employees engage in it. Google's Dublin office offers an open floor plan with individual workstations, booths and pods for group discussion and open areas with many seats for collaborative work and brainstorming. I believe the key to Google's office space success is their company-wide philosophy, along with the employee's ability to choose which space is most suitable for their work.

This chapter has examined a range of workspace elements and

has evaluated which elements may impact employees' ability to be creative and innovative in their work. The greatest discovery through this process is that employees must be offered flexibility in their office space. No two employees are exactly the same, and what works for one employee may not work for another. Allowing employees the ability to have a choice in their space, while allowing them to make adjustments, such as choosing a different space to work in each day, or choosing the color palette and lighting levels, might have the greatest impact on creativity and innovation levels of employees.

In conclusion, the following processes or office design elements can be implemented to improve work spaces. A few or all of the following can be implemented to create a space that is better suited to support creativity and innovation.

- Ensure the continued assessment of issues and solutions are examined throughout the entire design process, as well as after the design resolution. Checking in regularly with employees after a space redesign will ensure that the function of work is being supported by the space.
- Evaluate the function of work that must be done in each space (individual processing, group communicating, individual analyzing and creating, or collaborating) before determining spatial layout.
- Provide a space that allows for both collaboration, and a space for focused work. This can be done via zones with guidelines created by the organization for each space; hoteling, groupings, private offices, coworking spaces or collaborative spaces.
- Create destination paths that allow for interaction by including nodes along destination paths. This will allow for spontaneous conversations among employees.
- Create a stimulating space that offers stability to the employees who will use the space regularly.
- Provide wall and floor treatments, as well as ornamental features such as columns or furnishings. These can add a level of stimulation to employees while not being overbearing to the user.
- Adjust lighting to accommodate employees' preference in their areas. Provide lamps, as well as access to natural lighting, to increase employee productivity.
- Create focused and collaborative zones to manage noise levels. Appropriate office materials (tall cubicle walls, soft or hard surfaces) should be used in each of the spaces to help support the ideal noise levels for that space.

- Use the appropriate color and saturation levels to support the function of work to be conducted in the space. Refer to “The Impact of Color on Employees and Office Environment” image (page 59) to help guide the color choosing process.
- Place furnishings strategically to support the function of work for the space. Chairs without back supports that can easily be moved are more appropriate for short brainstorming sessions, while more comfortable seating should be provided for work that requires lengthy work sessions.
- Position plants strategically throughout any office area. Plants have been shown to help with idea generation and problem solving, impacting productivity for both men and women, and can also serve as a sound barrier.
- Allow employees at all levels to be a part of the office space planning process. This will allow employees to have a voice regarding their space and allow them to become advocates for the change. Making sure that leadership utilizes the space and has the same guidelines as all employees will help gain employee support for this initiative.

As you can see from the above elements and processes, this human-centered approach to office design will ultimately impact how work gets done, impact creativity and job satisfaction of employees, and drive innovations in organizations. This approach will ensure employees are given flexibility to customize their space based on the function of their work, creating an environmental wholeness that nurtures individual and collective creativity. It will also motivate, support and further advance creativity and innovation among employees in the office environment.

Chapter 4

Future of Work

... It reminds of what the beaver told the rabbit as they stood at the base of the Hoover Dam:
‘No, I didn’t build it myself, but it’s based on an idea of mine.’
- Jack Kilby

This study examined the evolution of work and what employees, leaders and organizations can do to continue to be competitive in the marketplace in the future. So where is the future of work headed?

As America shifts from service economy to experience economy, knowledge-based work will shift to project-based work that meets new needs of clients and consumers. Organizations will begin to create value for consumers by using empathy skills and by valuing people and their opinions. Organizations will employ people who have certain skill sets and will work with clients to customize projects to meet clients’ specific needs. Adam Grant, author of *Give and Take: Why Helping Others Drives Our Success* states that we are shifting to an interdependent working model where people must work with, for and through other people (Grant, 2014). This interdependency highlights the importance of collaboration and a well-designed office space that supports collaborative work.

Future organizations will begin to shift from highlighting individual contributions to focusing more on what collaborative groups are producing. Strategic collaborations that bridge people from a variety of disciplines will be the new way in which groups work. Groups will explore, frame problems, ideate and implement their ideas together. Groups’ performance will be assessed based on how they work with each other and the outcomes they produce. Groups will work together with computers, not compete against them, to generate new innovations. Doug Engelbart, known for developing the idea of augmented intelligence, suggests that machines and humans will get smarter together. Engelbart calls it “bootstrapping” or “coevolution” (Isaacson, p. 478).

Leadership will be customized towards employees’ needs and motivation levels of individuals will increase, as employees progressively appreciate the value they bring to their role and the organization. Leadership will prioritize group work and support and motivate individuals to work together.

The shift towards a more collaborative working model will begin to produce more cre-

ative ideas among teams and lead to innovative outcomes. These innovations will then meet unknown needs and wants of consumers, leading to more satisfied consumers and thriving organizations. If employees and organizations continue to seek opportunities to meet consumers' needs by using a user-centered approach and empathy, collaborative working groups will continue to develop innovative outcomes. These innovative outcomes will continue to create jobs, and the economy will shift to an era of abundance. Consumers, employees and organizations will thrive, providing more jobs and stimulating the economy.

Chapter 5

Optimizing Creativity & Innovation

It's not just setting the stage... it's how you use the stage.

- Brian Ferguson

The common theme discussed in this study has been how to implement a user or human-centered approach to creating both leadership styles and office environments that motivate and support individuals in the workplace. Focusing on how each employee can be most productive and motivated will support innovation in the workplace and improve future work.

The size of organizations may impact the strategies used in order to create this type of environment, especially since resources are limited in most organizations. This chapter will outline a plan to help leaders who supervise one or many employees to develop a more supportive leadership style and office environment for employees.

How does an organization ensure they are pairing the right employees with the most productive environment and most effective leader? Much of this information can be gathered by having candid discussions with new employees during the on-boarding process or when an employee is shifting to a new leader. Leaders should use emotional intelligence and empathy when having these discussions and spend much of the time listening. It is important for the leader to ask questions such as:

- Tell me about a recent situation where you felt most valued
- Tell me about a time when you felt most productive. What type of environment were you in?
- How can I help support you in your role?
- What types of rewards do you seek after accomplishing goals?
- What types of projects make you feel like you provide the greatest contribution?
- What type of environment do you work best in?
- What kind of feedback do you prefer when you are working towards a goal?
- If the job requires the employee to work in both individual and group settings, the leader should ask how she feels the most productive in these two situations.

Leaders can provide this list of questions prior to the discussion to allow employees time to evaluate what works best for them and provide clear answers. It is also beneficial for employees to provide written answers to the leader so there is documentation. This creates a starting point for the discussion as well as the ability to revisit the information at a later date.

After allowing employees to voice their thoughts on the questions asked in an individual setting, the leader should then evaluate how her leadership style can support each employee based on what motivates him, keeping in mind leaders that foster collaboration while providing a clear vision are often the most successful (Isaacson, p. 484). The leader will likely utilize a variety of leadership styles such as the shared, transformational and integrative leadership styles based on the employee's needs and the particular situation. To review, here are short descriptions of each of aforementioned leadership styles:

- Shared- This style allows employees to spread leadership responsibility across experts from cross-functional teams. This allows the right people with the right skill sets to make the decisions.
- Transformational - This style of leadership is primarily focused on people or the employee versus focusing purely on the project or task at hand. Transformational leadership is based on the assumption that the leader has a vision for the employee or team, treats them with respect and trust, provides inspiration and motivates employees by developing high expectations in order to help employees be successful.
- Integrative- This leadership style challenges the leader to bring together the transaction, transformational and holistic processes to develop a more meaningful leadership style. This style focuses on the leader and the team member and allows for conversation between them, giving both parties a chance to share ideas and reflect on where they are now and where they want to be. This process develops a vision for both the leader and the employee as it fosters collective action to solve problems and brings together people and resources to create more collaborative ideas.

The leader should also speak to each employee about the organization's mission and values and about the value of the employee's contributions to the organization. This will help motivate the employee to work towards a shared goal. While the leader should give the employee space to be autonomous after this discussion, it is important that the leader provide candid, continuous feedback so the employee can adjust as progression occurs and new expectations are set. This will create an open communication environment where the employee feels that she can bring new ideas to the leader to further support an innovative work environment.

During the initial employee-leader conversation, the leader should have gathered enough information to be able to work with the employee to determine the type of environment the

employee will feel most supported in. Leaders should consider what type of work the employee would be doing most frequently to determine if it will be focused or collaborative work, or a mix of both. The leader should also consider whom the employee would be working with most frequently in order to determine what area of the office makes the most sense for the employee to work in.

As discussed in Chapter 3, there are a number of ways that office space can be designed to better support creativity and innovation. All elements can be employed or a few based on the needs of the employees and the function of work to be conducted in the office space. Please refer to the list in Chapter 3 for information on how to create an environment that supports creativity and innovation.

The shift from the “you get the next available desk mentality” to allowing employees to be a part of the decision-making process will help to create open communication. Determining the location of each employee, based on the function of work to be conducted in the space, is imperative to seeing changes in how people work. Allowing employees to explain what setting would be most suitable for their work function will also help them feel more comfortable in their new office space. The comfort level employees feel will impact interactions with the leader and teammates and will raise idea generation. The more comfortable an employee feels, the more likely she is to contribute ideas to the group.

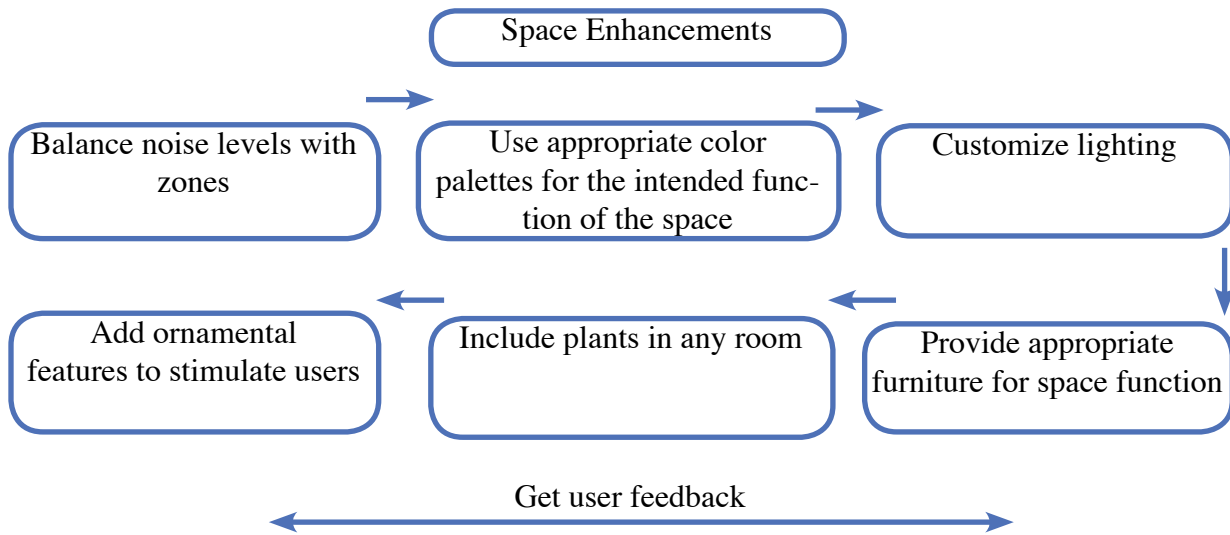
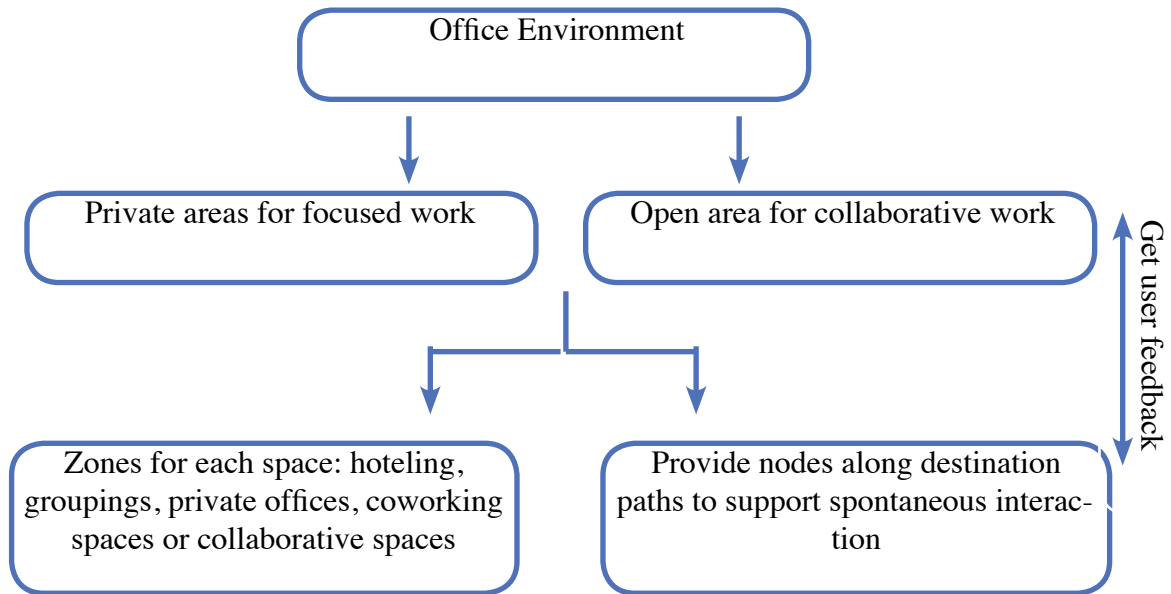
This approach to leadership and office design will ultimately impact work completion, increase creativity and job satisfaction of employees, and drive innovations in organizations. This approach encourages employee feedback and will motivate, support, nurture and further advance creativity and innovation among employees in the office environment.

I began this study by examining the evolution of work and the impact that innovation has had on work in the twentieth and twenty-first centuries. The future of work looked gloomy for the American people based on American history and the recent economic landscape, but innovation is the key to thriving as America shifts from the service to experience economy. Using employee skill sets in both right-and left-brain thinking, customizing leadership styles and office environments, and investing energy and resources will support creativity and innovation, helping to stimulate the economy and create jobs. Skill sets of American workers should also be considered when innovating to ensure we create work for both skilled and knowledge workers.

This study has reviewed the evolution of work, evaluated what may motivate employees, discussed how leaders can most effectively lead in a variety of situations and examined how office space can be most supportive based on the function of work. I have provided recommendations on how to apply these theories in order to motivate, support and further advance creativity and innovation among employees in the workplace.

Using this knowledge to recognize how to customize leadership style, as well as using empathy to discover how employees can function optimally in an office space, will not only create a more supportive office culture for employees, but will also help to create a more satisfied workforce that strives towards innovation. People possess imagination and as Ada Lovelace, most commonly known as the world's first computer programmer, said, imagination "brings together things, facts, ideas, conceptions in new, original, endless, ever-varying combinations" (Isaacson, p. 486). How will we use leadership, imagination and collaborative creativity to work *with* machines to create the next big innovation?

Best Practices



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