Decentralized Design Management

Managing People and the

Design Process for a Geographically Dispersed Creative Team

A thesis submitted to the School of Visual Communication Design,

College of Communication and Information

of Kent State University in partial fulfillment of the

requirements for the degree of Master of Fine Arts

by

Brian M. Buirge

MAY, 2013
Thesis written by

Brian M. Buirge

B.F.A., Kent State University, 2008
M.F.A., Kent State University, 2013

Approved by

Ken Visocky O’Grady, M.F.A., Professor and Advisor, School of Visual Communication Design

AnnMarie LeBlanc, M.F.A., Director, School of Visual Communication Design

Stanley T. Wearden, Ph.D., Dean, College of Communication and Information
# Table of Contents

ACKNOWLEDGMENTS .............................................................................................................. v

PREFACE .................................................................................................................................. vi

LIST OF FIGURES.................................................................................................................... viii

CHAPTER I: Introduction ........................................................................................................... 1

CHAPTER II: Research .............................................................................................................. 4

  Assumptions .......................................................................................................................... 4

  Primary Research .................................................................................................................. 5

  Case Study ............................................................................................................................. 7

  Secondary Research/Literature Review ................................................................................. 8

  Limitations ............................................................................................................................ 8

CHAPTER III: People ................................................................................................................... 10

  Hiring ................................................................................................................................... 10

  Motivation .............................................................................................................................. 13

  Autonomy .............................................................................................................................. 19

  Mastery .................................................................................................................................. 28

  Purpose .................................................................................................................................. 34

CHAPTER IV: Teams ................................................................................................................... 39

  Leadership .............................................................................................................................. 40

  Communication and Trust ...................................................................................................... 46

  Relationships ......................................................................................................................... 51

CHAPTER V: Collaborative Aspects of the Design Process ......................................................... 55

  The Creative Problem Solving Process .................................................................................... 55

  Ideation and Iteration ............................................................................................................. 58
Acknowledgments

I would like to express my most sincere gratitude for the support, patience, and encouragement I have received both during the work on this thesis as well as during my experience in grad school. This thesis, as well as my personal and professional growth is a result of the cumulative efforts of the following people:

• Dianne and Tim Buirge
• Ruth and Bill Schmitz
• Jason Bacher
• Jason Richburg
• Terry Valentino
• Ken and Jenn Visocky O’Grady
• Sanda Katila
• David Middleton
• Laura Smous
• Rachel Hellgren
Preface

Prior to entering grad school I was fortunate enough to have a variety of professional experiences freelancing and working for companies that required some form of long-distance collaboration. During this time I became increasingly interested in how the process could be enhanced, improved, and made more efficient. While freelancing, I also ran into occasions where, due to distance, potential work had been denied to me. I would also find myself in situations where I was unable to accept more rewarding work because, as an individual, I did not have all of the skills necessary to take on larger jobs.

Frustrated by these experiences, I started considering how I could leverage the relationships I had with colleagues who had differing skills sets from mine to take on these bigger jobs. There were a variety of less than successful attempts at acquiring and executing design work early on, and as time went by a few of us stumbled through the challenges of working remotely on projects, but nothing directly successful came from our attempts.

As I entered grad school, I had all but given up on the idea. I had resigned myself to spending the next few years completing my degree assuming that perhaps, once I graduated the technology would be there to give it another go. As circumstance would have it, I was able to both research the idea of creative virtual teams as well as continue to experiment in my professional practice during my graduate school experience. Through the marriage of the academic and professional perspectives, I have been able to take an entirely different look at the possibilities behind this process and put the research into practice and the practice into research.

This thesis became an investigation into the people and teams behind the design process, looking at what motivates them to do great work, and how it can be
possible for this to occur in a virtual team setting. Within the constraints of current
digital technology nothing can replace real face-to-face human interaction; however,
consideration of the human-component of working and collaborating can make the
process equally productive and rewarding.

This thesis is just the beginning of an experimental approach to running a Design-
based business in the 21st century.
List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>The Candle Problem</td>
<td>16</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Algebraic Asymptote</td>
<td>34</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Level 5 Leadership Chart</td>
<td>42</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Summary, Two Sides of Level 5 Leadership</td>
<td>43</td>
</tr>
<tr>
<td>Figure 5</td>
<td>The Osborn-Parnes Creative Problem Solving Process</td>
<td>56</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Case Study: Echo International Strategy Documentation</td>
<td>73</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Case Study: Echo International Site Map</td>
<td>74</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Case Study: Echo International Web Concept</td>
<td>75</td>
</tr>
</tbody>
</table>
CHAPTER I

Introduction

Collaboration is the unifying thread that produces superior innovations and creative design solutions that otherwise would not be possible from a single person or a single team alone (Meyer, 2000, p.15). It is a key factor to fostering innovation, and in the creative economy that exists today, innovation is indispensable to success (Florida, 2002, et. al.). Advancements in technology are evolving the ways in which designers, as well as people in every profession, collaborate. The growth of social networking, instant messaging, web conferencing, online project management, and even distance learning are clear indicators of this evolution.

Within the design profession, twenty-five percent of people are self-employed working as a freelancer or an independent contractor (Bureau of Labor Statistics Occupational Outlook Handbook, 2010–11 Edition, 2010). This figure is approximately five times the proportion for all professional and related occupations and trends point toward continued growth during the next decade. As larger companies and corporations continue to downsize from top-heavy, centralized approaches to leaner, more nimble organizational structures, centralized in-house design functions are likely to be outsourced or downsized along with them. Marketing, usually inclusive of design, is typically the first item to be cut during an economic downturn, and is usually slow to restaff during periods of recovery. As a result of this fragmentation, small agencies are tending toward specialization, bidding farewell to the Mad Men era all-inclusive agency approach that once dominated the creative field.

With companies downsizing, and the need for creative collaboration increasing, there is a clear need to develop better leadership of decentralized creative work and
the virtual teams who create it. Better collaboration of these fragmented virtual teams is a key differentiator in attracting, supporting, and maintaining a healthy client base. Individuals and small businesses that tend toward specialization, and can successfully collaborate with others who operate in their own unique areas, are able to offer more comprehensive services to their client-base without increasing overhead costs.

The ability of a company to capitalize on opportunities can often depend on the speed at which it can produce a team of individuals. “This puts a big premium on the skills of virtual management—the ability to run a team whose members aren’t in the same location…” (Wardell, 1998, p.3) With the necessity for distance-collaboration growing, an understanding of how to hire and contract with the right people, motivate them, and help them to successfully work in both co-located and virtual teams will help increase the quality of work as well as the quality of experience for the team members. Virtual teams must be more and more about the people, teams, and culture and less about technology, control, and rigidity. Strong leadership will help to increase efficiency, maintain a common creative culture, and keep team members connected and working with greater continuity.

This thesis will begin by examining the individual person and look at what drives her motivation to produce innovative and creative work. After establishing the criteria to motivate an individual it will take an in-depth look at the leadership necessary to develop the type of inter-personal environment that enables successful collaboration for people who are both co-located as well as operating in virtual teams. Finally, it will look at the creative process as a means of linking the first two sections together—essentially moving from individual, to team, to the creative process in which these people are involved. Interwoven through the team and process sections will be information and research
about how to successfully lead people who are working virtually and what challenges still exist.
CHAPTER II
Research

Assumptions

Whether knowingly or not, the onset of every design problem begins with making assumptions about the inherent opportunities contained within that problem. Acknowledging these assumptions is a key step in the beginning phase to not only recognize potential bias, but also as a platform to commence research and gather insight. Based upon personal experiences prior to the research conducted for this thesis, the author made some assumptions about what the key factors would be for successfully managing virtual creative teams. These assumptions focused the initial interviews and both primary and secondary research around the importance of technology to successfully implementing and orchestrating virtual teams.

Assumptions included:

- Technology that has become available during the last 10 years makes managing geographically dispersed teams easier.
- Research would uncover a specific group of online communication technologies that agencies and creative firms used to successfully collaborate.
- There is a vast difference in the experiences between people who work in co-located environments vs. virtual environments.
- Job satisfaction is related to financial compensation.

As the initial phase of research progressed, the findings pointed further and further from technology being the linchpin of successful distance collaboration and more towards the people, teams, and culture involved in such collaboration. From here the
research charted a new course; moving away from the stringent focus on technology to the important research and analysis of the human factor.

While digital communication technologies are required to conduct distance collaboration, they do not guarantee successful work flows—they merely enhance them. Larger corporations and companies have been working in virtual team settings both successfully and unsuccessfully for decades with far less sophisticated technologies at the helm. Additionally, the rapidly evolving nature of digital technology would surely guarantee obsolescence of a technology-focused thesis before it was completed. Healthy leadership and cultures have had a far greater impact on the potential success of teams than the latest version of iMessage or the newest smart phone.

**Primary Research**

In-depth interviews were conducted with participants working at creative agencies who held various job titles from junior designer, to owner, as well as business managers and sales representatives. Agencies were selected on the basis of having any amount of experience in virtual team approaches to the creative process. Interviews typically lasted between thirty and sixty minutes in length and each had some form of follow up interview either in person, or via email. All participants were asked a standard set of questions pertaining to the role of both technology and culture within their workplace. Additional questions were asked as the conversation progressed in an organic matter and were geared towards the specific job or task the individual performed for their company.

Qualitative data was aggregated and analyzed from the interviews to help guide the progress of this thesis. There were a variety of trends that showed up upon review of the interviews and were further validated by other primary and secondary research
conducted. A consolidated analysis of the trends are presented below, following the same sequence as the narrative of this thesis and they are further detailed in Chapters 3–5:

First, in interviews, those responsible for hiring typically discussed the need to find the “right people.” The right people further defined included terms and phrases such as: self-starter, independent, motivated, passionate, a good fit to the office culture, and a willingness to learn. Interestingly, once a person had become employed, their job satisfaction was directly related to their employers’ ability to actualize that aforementioned list of desirable traits in a hire. Financial compensation had little to do with long-term job satisfaction and retention. Dissatisfaction was typically a result of the mismatch between what employers looked for in a hire and what their work culture actually provided. This was further validated by a vast array of secondary research.

Employees and employers placed great value in providing and maintaining a common creative culture. This value placed on creativity became particularly important it came to individuals or teams who worked virtually in a decentralized fashion as it has the potential to enhance remote work. All employers who hired remote workers required that they spend some amount of time being co-located at a central office with other employees before being permitted to work off-site. The amount of time required by any agency varied from three weeks to six months. Clear, regular communication was considered vital to working with remote teams and people. Employers and employees felt that when long-distance collaboration did not go smoothly the primary reason for the difficulty had to do with a lack of communication.

When initiating a project, nearly all interviewees felt that it was important to have the first internal meeting and external meeting (with the client) in person. Once engaged in the process, there was a general split in how to handle the critiquing and iterative
portion of remote working. Generally, younger practitioners were more comfortable with receiving feedback via digital communications. They preferred some kind of face-to-face meeting like Skype, or a phone call and then a short email list of the conversation. More senior practitioners displayed a general aversion to not working and critiquing in person with their team. Both did feel that the digital critique process still had some ways to go before it could match the in-person experience.

**Case Study**

While both primary and secondary research was being conducted for this thesis, the author was putting to use the theories and lessons being learned by testing out various findings through actual professional projects at the two companies he co-owns. One is a small design agency that collaborates with other individuals and small businesses who offer complimentary services, and the other which is an online retail and lifestyle brand. A detailed case study was created from one of the web design projects handled at the design agency. During this time the author’s company provided design services while collaborating long-distance with a software and web development firm in a different city to design a web presence for an international translation agency in Pittsburgh, Pennsylvania. The author’s agency met in-person with the development team and client for the initial kick-off meeting and also for other key meetings requiring client interaction during the process. All other meetings were conducted via video chat and communication primarily handled via email and phone. Throughout this time, multiple visual design concepts were created, selected, refined and moved into development phases, all with minimal face-to-face interaction. The final result was a successful collaboration with room for refinement and improvement based upon both the
experience, as well as the findings further researched in this thesis.

**Secondary Research/Literature Review**

As the primary research revealed a need to look into the psychology of what motivates individuals in the work environment, the secondary research shifted to research behavioral, humanist, and positive psychology. The book, *Drive: The Surprising Truth About What Motivates Us*, by Daniel Pink provided the starting point and an array of references to delve into this unfamiliar territory. Research into both design process and management was conducted through a variety of books and academic papers, many of which came from the Design Management Institute. A number of books and articles on management, leadership and virtual teams were also researched to help frame the problem.

The end result of this research is a thesis influenced by interviews and experiences in professional practice, and heavily grounded in secondary research covering an array of areas from: design process, business and management, and research within the fields of humanist, behavioral, and positive psychology.

**Limitations**

The primary research conducted during this study was limited to a selection of companies and individuals within the United States with whom the author had a either a direct or indirect connection. Limitations of time and resources impacted the sample size, location, and methods used for collecting data. As the author is a designer and not a psychologist, the primary research could not properly include more in-depth research on the psychology of employees and employers and thus this portion of the research relies
heavily on previously existing secondary research. These limitations were considered in
the development and execution of this document.
“A company’s most important asset isn’t raw materials, transportation systems, or political influence. It’s creative capital—simply put, an arsenal of creative thinkers whose ideas can be turned into valuable products and services. Creative employees pioneer new technologies, birth new industries, and power economic growth. Professionals whose primary responsibilities include innovating, designing, and problem solving—the creative class—make up a third of the U.S. workforce and take home nearly half of all wages and salaries.” (Florida, 2005, p.125)

If the creative employees are the most important asset of a company, it only makes sense that any company, regardless of working co-located or in virtual teams, attract and hire the best talent available, and then work relentlessly to provide them with the environment to do their best work possible. This section will look at best practices for hiring and then take a deep dive into what motivates these people to do innovative, compelling creative work.

**Hiring**

The most well intentioned leadership and process cannot survive a team committed to mediocrity. Thus the importance of the first and often most ignored step of leading any creative team or process is start with the right people. Without the right people to lay the foundation in an organization, company, or team, the rest of the process will inevitably fall apart. Once the right people have been obtained, leadership must
provide an environment in which these people can thrive—whether they work in a small office space in New York City or they are scattered about across multiple towns, cities, and time zones.

Building the right team could be compared to how the Marines recruit people. Dave Nassef of Pitney Bowes explains, “The Marine Corps recruits people who share the corps’ values, then provides them with the training required to accomplish the organization’s mission. We look at it the same way at Pitney Bowes...We don’t just look at experience.” Successful companies place heavier weight on character attributes than on educational background, practical skills, specialized knowledge, or work experience (Collins, 2001, p.51). In the series of interviews conducted for this thesis, respondents consistently explained that they looked for character attributes over technical skill.

Determining the right person or people is not an easy task. While there is a degree of subjective criteria that is specific to the culture of any given company, there were a variety of qualities and traits that those responsible for hiring typically looked for in potential candidates. The terms and phrases that most frequently came up during the interviews were: curious, self-starter, patient, independent, motivated, good sense of humor, passionate, willingness to learn, and humble. One interviewee stated, “I like to find people who do not yet know how good they are, then unleash them with my seemingly benign-neglect management style.”

In a direct correlation, typically any dissatisfaction an employee or collaborator had with their work environment or experience was related to the employers’ ability to actualize that aforementioned list of desirable traits in a hire. If there was a mismatch between what employers looked for in a hire and what their culture actually provided, it was reflected in the views and attitudes of their employees. In other words, an employer
would look for and hire someone that was autonomous and self-directed, but then sabotage their efforts and motivation through micro-management.

By placing an up-front emphasis on hiring practices, leaders are able to produce better team morale which leads to better results. Through the research conducted by Collins’ team for his ‘Good to Great’ book, they were able to define three practical hiring disciplines to ensure quality people:

1. *When in doubt, don’t hire—keep looking* (Collins, 2001, p.54)

   Don’t hire just because the company needs to hire, it’s best to throttle growth in anticipation of hiring the right person or people. Similarly, in the book ‘Rework’ by the founders of 37 Signals, a company that creates web-based collaboration tools, state “The right time to hire is when there’s more work than you can handle for a sustained period of time. There should be things you can’t do anymore. You should notice the quality level slipping… That’s when it’s time to hire, not earlier” (Fried, 2010, p.204)

2. *When you know you need to make a people change, act* (Collins, 2001, p.56)

   “The moment you feel the need to tightly manage someone, you’ve made a hiring mistake.” Allowing the wrong people to continue to hang around negatively impacts the right ones in a company or organization. The right people enviably end up compensating for the wrong ones and this can end up driving them away.

3. *Put your best people on your biggest opportunities, not your biggest problems* (Collins, 2001, p.58)

   The most successful companies in the research study showed that managing problems can only make a company good, but being able to build and capitalize on opportunities was the way to becoming great.
“The people we interviewed from good-to-great companies clearly loved what they did largely because they loved who they did it with” (Collins, 2001, p.62).

Great teams made through this rigorous hiring process consist of people who will debate vigorously in search of the best possible solutions and ultimately unify behind a specific vision. This is exactly the type of team necessary for creating innovative solutions to problems. Collins’ concludes with, “Whether someone is the right person has more to do with character traits and innate capabilities than with specific knowledge, background, or skills” (Collins, 2001, p.63–64).

**Motivation**

One aspect that was suspiciously absent during the early phases of the literature review was that of the human component in the design process. Few articles, and even fewer books took the time to really address the people engaged in the process. While client and vendor relations were covered thoroughly, designers and others working in an agency were rarely mentioned. The paucity of information and discussion on the human involvement in the process begs the question of what motivates people to do innovative and creative work in the first place? And to contrast, what demotivates people? This lack of information drove the secondary research in a direction to explore motivation theory as well as behavioral, humanist, and positive psychology as it related to leadership, management, and worker engagement. Without a foundational understanding of what drives people to engage in innovative and creative work, it seemed impossible to properly discern how to lead and motivate people in general, particularly the challenging task of leading those working on projects in a virtual team setting.
The first unexpected discovery about the motivation of creatives, as well as people in general, was the role that financial incentives played. While this thesis does not aim to analyze the financial aspect of the creative process, there are a few important concepts to be addressed as related to an individual’s motivation surrounding money and reward. The findings of this topic seem to defy common sense—or at least common business sense.

Until 1949, the world of science had defined two motivating drives for humans. The first drive is biological—people must ensure that their needs of food, shelter, water, etc. are met. The second drive is centered around rewards and punishments. People behave in a certain way to garner rewards and avoid behaviors that produce punishments. In fact, in the late 1800’s Frederick Winslow Talyor developed the system of scientific management which believed that a worker’s motivation is solely based on pay and only pay and that workers have no intrinsic drive therefore discounting any need to address the psychological or social aspects of work. In 1949, thanks to the efforts of psychologist Harry Harlow, that notion began its decline. Harry Harlow (a teacher of Abraham Maslow who later went on to found the Humanist branch of psychology) conducted an experiment at the University of Wisconsin–Madison that discovered the third drive. During a two-week period Harlow placed a 3-step mechanical puzzle inside the cages of eight Rhesus monkeys. The puzzle required the monkey to pull out a vertical pin, undo a hook, and finally lift up the hinged cover. Much to his surprise, when left alone the monkeys began to figure out the puzzle all by themselves. In fact, they became very good at it. This seemed perplexing because there was no extrinsic factor to motivate the monkeys.

Harlow concluded that there must be a third drive, the motivation to complete the task for the sake of the task. Following this discovery, they tried a similar experiment
where rewards such as food were introduced for a successful completion of the puzzle. Harlow wrote that the introduction of the rewards “served to disrupt performance, a phenomenon not reported in the literature.” This finding was so controversial at the time that it lead to Harlow’s dismissal in the field and little research about this third drive was published.

Nearly twenty years later, in the 1960s Sam Glucksberg, now a psychologist at Princeton University, conducted study using an exercise referred to as the “candle problem.” Originally designed by behavioral psychologist Karl Duncker in the 1930’s, the candle problem consists being seated at a table next to a wall and the experimenter provides the participant with a candle, a box of tacks, and a book of matches. The participant is challenged with fixing the candle to the wall such that, the wax does not drip on the table (fig. 1). People go through a variety of methods to solve this problem, and after 5–10 minutes most people stumble on the solution where they tack the box to the wall as seen here (fig. 1). The challenge is to overcome “functional fixedness.” Functional fixedness is a cognitive bias that confines a person to use an object only in the way that it has been traditionally used. In this case, it’s overcoming the concept that the box can only be used to hold the tacks (Pink, 2009, p.40–41).
Glucksberg’s study tested the candle problem on two groups. The first group was instructed to complete the task as quickly as possible and that the purpose of the experiment was to establish as baseline for the length of time it took for the average person to solve the problem. The second group was financially incentivized. The participants would be awarded $5 if they were in the fastest 25 percent and $20 if they were the fastest of all participants. The results were shocking. On average, it took three minutes longer for the group that was incentivized to solve the problem. (Glucksberg, et. al. 1962)

The obvious question that comes from these findings is—Why? Why is it that a financial incentive presented to improve performance ends up generating results precisely the opposite of the intended purpose? The reason is, rewards by their nature, narrow our focus. In cases where tasks are algorithmic and routine, these rewards work perfectly fine. However, when tasks are heuristic, requiring people to devise creative and innovative approaches to problems that are non-linear and lack a clear path to a solution, they hinder and degrade performance (Pink, 2009, p.42). Connecting to the topic of
globalization, these algorithmic, routine jobs and tasks are the ones that are increasingly becoming outsourced and automated while the heuristic jobs and tasks that are innovative, intuitive, and creative are far more difficult and less-likely to be outsourced (Florida, 2002, et. al.).

Design is clearly one of these heuristic jobs. Creating a brand, a website, a new product is not a routine task. This kind of work requires conceptual, innovative thinking. And as one of these heuristic jobs, it is important to find the best ways to motivate and inspire those people who practice it daily.

If incentivizing design and creative work through financial rewards is counterproductive, where exactly does money fit in to the equation then? Clearly those who practice need to earn a living wage and be able to support themselves as well as their families. And that’s just it, the best way to handle money is to pay people enough to take money off the table. Baseline rewards must be adequate and fair, these include wages, salaries, benefits, etc. (Pink, 2009, p.58). People must feel as if they are being paid commensurately to others performing the same type of work in other organizations. In a 2008 study conducted by the National Bureau of Economic Research, Henry Sauermann found that Sufficient levels of pay “may be beneficial for innovation because they allow individuals to focus on the work of innovation rather than worrying about their livelihoods” (Sauermann, 2006, p.24).

In Jim Collins’ book, Good to Great, the research team conducted an extensive study inputting 112 separate analyses looking for patterns and correlations in executive pay to great results. They found “no systematic differences on the use of stock (or not), high salaries (or not), bonus incentives (or not), or long-term compensation (or not). The only significant difference we found was that the good-to-great executives
received slightly less total cash compensation ten years after the transitions than their counterparts at the still-mediocre comparison companies” (Collins, 2001, p.49).

Beyond paying a fair salary, extrinsic financial rewards for performance should be unexpected and provided only after the job or task is complete. “Holding out a prize at the beginning of a project—and offering it as a contingency—will inevitably focus people’s attention on obtaining the reward, rather than on attacking the problem” (Pink, 2006, p.64). While compensation can’t be ignored, the purpose should not be to get the right behaviors from the wrong people, but rather to get the right people in the first place (Collins, 2001, p.51).

In a study conducted by Edward Deci and Richard Koestner in 1999 they found, “Engagement-contingent and completion-contingent rewards also significantly undermined self-reported interest, as did all tangible rewards and all expected rewards. Positive feedback enhanced both free-choice behavior and self-reported interest” (Deci, 1999, p.1). Furthermore, Dan Ariely, a professor of behavioral economics has concluded through a variety of studies in both India and the United States that “as long as the task involved only mechanical skill, bonuses worked as would be expected: the higher the pay, the better the performance. But when we included a task that required even rudimentary cognitive skill…the offer of a higher bonus led to poorer performance” (Ariely, 2008, para. 6).

If, based on these findings, financially incentivizing performance produces the opposite of the desired effect, then what are the components necessary to inspire and motivate people to engage in the heuristic, innovative problem solving tasks of design? Edward Deci, mentioned above, and his regular collaborator Richard Ryan have developed their own theory about intrinsic motivation called 'Self Determination Theory.'
“SDT...begins with a notion of universal human needs. It argues that we have three innate psychological needs—competence, autonomy, and relatedness. When those needs are satisfied, we’re motivated, productive, and happy. When they’re thwarted, our motivation, productivity, and happiness plummet” (Pink, 2009, p.70).

Since motivation plays such a key role in leading people, particularly people engaged in a professional creative pursuit, this thesis will use the lens of ‘Self Determination Theory’ to determine best practices for motivating people. Once proper means of individual motivation have been established, the next phase will be to look at how people engage with each other in collaborative team settings—What activities and behaviors help engender trust and build strong working relationships? It is through these strong relationships that a healthy creative culture will develop—regardless of co-location or virtual team approaches. Finally, looking at the creative problem solving process as initially outlined in 1953 by Alex Osborn, a founding member of the creative agency BBDO, this thesis will look at how some of these concepts can be integrated into various aspects of an established creative process to work in a virtual team setting as well as what challenges still remain.

**Autonomy**

One of the key components to effectively managing geographically dispersed staff is allowing workers at all levels to be self-directed. There can be a tendency for managers to desire stricter levels of control over employees, especially employees that are not physically co-located with them. This tendency must be avoided. As well intentioned as they may be, the more that management attempts to control creative employees the more they sabotage their own efforts. A study at Cornell University researched the motivation,
performance, and well-being of 320 small businesses. Half of the surveyed businesses
granted autonomy to their workers, while the other half followed a more traditional
hierarchical management model. The researchers found that the businesses that offered
autonomy grew four times faster than the traditional hierarchical model while having
one-third the turnover rate (Baard, 2004, et. al.). To be specific, people need autonomy
over four aspects of work: task—what people do, time—when people do it, technique—how
people do it, and team—whom they do it with (Pink, 2009, p.91–92).

task.

A small, but growing number of contemporary companies are providing workers
varying degrees of self-direction in their tasks. Google is one of the best-known examples
embracing this concept. Google engineers spend 20 percent of their time working on a
company-related side project that they are passionate about. That’s one day a week where
engineers are encouraged to work on whatever they’d like to. “Former Google engineer
Paul Bucheit created Gmail, now one of the world’s most popular email programs, as his
20 percent project. Many other Google products share similar creation stories—among
them Orkut (Google’s social networking software, Google Talk (its instant message
application), Google Sky (which allows astronomically included users to browse pictures
of the universe), and Google Translate (its translation software for mobile devices)”
(Pink, 2004, p.94). Interestingly enough, this concept is not as new as it seems. William
McKnight, the president and chairman of 3M during the 1930s and 40s believed in
autonomy as well, he was quoted as saying, “Hire good people, and leave them alone.”
McKnight so believed in his non-traditional approach that he allowed 3M’s technical staff
to spend 15% of their time on projects of their own choosing. A radical idea at the time for sure, but it ended up generating numerous innovations at 3M including Post-it notes (Pink, 2004, p.93).

More and more companies are following this trend of 20 percent time, or some derivation of it. Both Apple and LinkedIn instituted programs in 2012 of a very similar nature. Under the leadership of CEO Tim Cook, Apple launched “Blue Sky.” This new program at Apple Corporate Headquarters allows select engineering employees at the corporate headquarters to spend a few weeks working on a pet project (Lessen, 2012, et. al.). LinkedIn launched their [in]cubator program in late 2012, which was an extension of their “hackdays.” The [in]cubator program allows an employee, once a quarter, to come up with an idea, put together a team, and pitch it to the executive staff. If the project gets approval, the team is allotted up to 3 months of time to develop the idea. “The creativity, variety, and enthusiasm have been inspiring. We’ve seen proposals for internal tools, new product & business lines, infrastructure improvements, and human resources programs. The teams have included folks from all over the company, including engineering, product, design, marketing, sales, and human resources. We see [in]cubator projects as small investments that have the potential to become big wins for the company…It works across all 26 international LinkedIn offices and has captured the hearts of those who normally shy away from Exchange” (Scott, 2012, para. 4). Once a project has been approved, the executive staff assists in advising the project and helps to provide resources to ensure the project develops successfully.

Designing a business structure that allows for people to have self-directed initiatives help drive innovation in an economy that demands non-routine, creative, conceptual abilities. They also help improve employee buy-in, increase productivity, and
decrease turn-over—all important components to both personal- and company-level success.

**time.**

Time-tracking is a practice readily employed by creative agencies. It can be directly connected to the billable hour; however both of these concepts are becoming rapidly outdated as the economy shifts away from algorithmic, routine jobs and tasks to heuristic jobs requiring creative, non-linear, iterative approaches to problem solving. Frequently in one-on-one individual interviews, staff members criticized the use of time-tracking, stating that time tracking “feels like an unnecessary means of controlling my process and behavior.” Many report forgetting to report hours immediately after completing tasks resulting in unethical behaviors of simply making up hours to comply with company policies. Some simply decided to approximate their hours at the end of a week. Others report the regular interruption of filling out time-tracking software as a distraction, breaking up their “creative flow” during the day. One individual reported that he was instructed to bill hours under a different client because the one he was working on was over budget. For staff, “the focus inevitably veers from the output of their work (solving a client’s problem) to its input (piling up as many hours as possible)…These sorts of high-stakes, measurable goals can drain intrinsic motivation, sap individual initiative, and even encourage unethical behavior” (Pink, 2009, p.97).

Additionally, because of the changes and developments of digital communication technology, greater demands are being placed on employees outside of the office environment. “With the widespread adoption of cellular phones, laptop computers, wireless Internet, and mobile email devices, this spatial rigidity has broken down,
complicating a central tenet implicit in most employment relationships: the right of workers to restrict workplace or management access during private time” (Ladner, 2008, p.466).

This traditional means of evaluating performance as it relates to time and presence is being challenged by Cali Ressler and Jody Thompson who have created the “Results-Only Work Environment” (ROWE). Ressler and Thompson argue that we all labor under the myth that: Time + Physical Presence = Results. The Results-Only Work Environment is a management strategy where employees are evaluated on performance and not on presence. The focus is on results and only results. A ROWE is defined as: “Each person is free to do whatever they want, whenever they want, as long as the work gets done” (Ressler, 2008, p.66).

Ressler and Thompson are employees at the corporate offices of Best Buy where they pioneered and developed their innovative ROWE approach through the early 2000’s. As a result of this approach, Best Buy corporate offices have benefitted greatly. Productivity has increased an average of 35% and voluntary turn-over has decreased as much as 90% in some divisions. Also, the employees are happier and lead more balanced lives due to their freedom. (Ressler, 2008, et. al.)

In 2008, Gap Inc.’s Outlet Division decided to pilot ROWE to examine the impact it would have on work-life, employee engagement and turnover. In a case study done by Ressler and Thompson, the pilot produced significant results for the Gap: Production turnover dropped by 50% and employee engagement scores improved by 13 ppts, the best performance in the division. Several hundred thousand dollars in savings were realized by reduced recruiting and relocation costs. (Ressler, 2008, et. al.)

In ROWE, employees don’t use time to judge their performance or to judge their
coworkers’ performance. Managers can’t use time as a means of controlling employees either. The focus is always results. “When people are in a ROWE they are actually more responsible rather than less because they are now being rewarded with freedom. What happens is that, rather than take advantage, people actually get more work done” (Ressler, 2008, p.101).

In the digitally-connected, information-rich world we live in, the interesting thing about work is that almost every day most people go to a physical space to do virtual work. People sit at desks or in assigned cubicles to send and receive e-mail. In these same spaces, people talk on a phone and hold conversations with others all over the world (and sometimes with coworkers on a different floor in the same office). Many have a laptop that stays attached to the docking station at the office. “When you force someone to be at a specific place at a specific time every single day, they’re not going to give their best. If they have an idea outside the sanctioned time and place they’ll fight it back. And when they’re at work at least some part of them will wish they were somewhere else. Nothing stifles creativity and innovation like resentment. In a ROWE, work isn’t a place you go—it’s something you do” (Ressler, 2008, p.116).

Trusting employees and coworkers with their time allows them to move from evaluating their work by hours logged and physical presence to results and only results. The consequence of this type of leadership creates a healthy life-work balance that motivates employees and culminates in increased productivity and decreased voluntary turnover.

technique.

The next step beyond providing an environment where employees are trusted
to manage their own time is to allow them to also manage their technique—how they go about doing what they’re tasked to do.

This type of leadership has been the cornerstone of Herman Miller, Inc. through its 85+ year history. Founder D.J. DePree is credited as instilling his unwavering trust in the value of design. In keeping with the family tradition Max DePree, D.J. DePree’s son, the former president and CEO of Herman Miller, Inc. said, “In addition to all of the ratios and goals and parameters and bottom lines, it is fundamental that leaders endorse a concept of persons. This begins with an understanding of the diversity of people’s gifts and talents and skills” (DePree, 1989, p.9).

Tony Hsieh, the founder of the online shoe retailer Zappos has taken the approach of individual autonomy to his customer service call center. Call centers in the United States and UK have an annual turnover over 35%—which is double the rate for other jobs (Pink, 2009, p.100). Unlike most call centers, the employees at Zappos have one job: Serve the customer. There are “No scripts. No monitoring. No timing of calls either. If a call takes one minute, great; if it takes one hour, no problem” (Pink, 2009 p.101). The result is that the customer services at Zappos is consistently ranked as one of the top companies in the United States—even ahead of Apple. Their turnover rates are also significantly lower than that of other call centers.

In interviews conducted for this thesis, one of the qualities that was prized for a good hire was being a self-motivated problem solver. The preference for this type of attribute far outweighed the desire for someone who was technically proficient. One interviewee stated, “I look for someone who has the capability and motivation to learn and the ability to solve a problem with little direction.” With such traits being key desirable qualities in a hire, it is no wonder that those motivated problem-solvers who
possess them are frustrated in environments where they are constantly micro-managed. People or collaborators have been hired because they are experts at the job they’ve been tasked with doing. Consequently, it is imperative that “those with the responsibility for leadership, must be dedicated to making the ‘gift of space’ available to others…” (DePree, 1989, p.85).

Current CEO of Herman Miller, Inc., Mike Volkema, continues DePree’s philosophy by “assuring that people are allowed to be passionate about design, that they are given space to think, grow, and make design a part of what wakes them up and taps into their souls” (Beckwith, 2000, p.57).

“It is important that managers do not seek to manipulate but instead look to develop partnerships with team members. Over-control or the implementation of inflexible or too tight boundaries appear to be the most common problem… The development of a shared vision is a key element in directing and bonding a team, for without such a vision members can feel disenfranchised and devalued, leading to problems of trust and demotivating within the team” (Ind, 2006, p.46).

People need to have the autonomy to move forward with what they feel is the best course of action and to not be limited and controlled by management. The result of such freedom are happier, motivated employees who outperform their restricted counterparts.

team.

One of the many reasons people are drawn to entrepreneurship is the ability for them to create and nurture a team of their own. Providing the opportunity for a employees to select team members and collaborators can be a challenging task, but there
are some example organizations who are finding innovative ways of accomplishing such a feat. At Whole Foods, the task of hiring falls on the specific department’s employees. After working a 30-day trial, the prospective teammates vote on whether or not to hire the person. Similarly, at Facebook, recently hired engineers spend six weeks in company boot camp. During this time they interview with the various teams and ultimately they decide which team they want to join. (Pink, 2009, p.102–103)

At the author’s design agency, all owners and employees vote on potential collaborators and hires. They weigh the pros and cons of working with other individuals or teams on both client and internal work. The discussions are primarily focused around the personalities involved in the collaboration, but also the team discusses expertise, reliability, and the implications for a continuing relationship. This approach is particularly important in a working environment that contains less than 10 people. One person or collaborator that doesn’t fit with the culture can have very damaging implications for how the team functions. By providing the opportunity to select team members for a project, the fit between outside team members and internal employees typically results in lasting relationships, continuing collaborations, and successful hires.

Encouraging autonomy does not mean discouraging accountability (Pink, 2009, p.105). Rather, evidence points to quite the opposite—people want to be accountable. The science shows that humans are designed to be self-motivated autonomous individuals. By providing people the freedom to have control over their task, time, technique, and team they are set free to contribute to the company their best work on their own terms, in a way that becomes personally fulfilling.
Mastery


Traditional methods of management look to control behavior in an organization. Control leads to compliance, which works fine for definitional tasks; however, it falls short when solving complex problems that “requires a willingness to experiment one’s way to a fresh solution” (Pink, 2009, p.109). While control leads to worker compliance, autonomy on the other hand leads to engagement. Out of this engagement, mastery, the second key motivator can develop. Mastery, as defined by Daniel Pink, is quite simply, the a desire to get better and better at something that matters.

the autotelic experience.

Mihaly Csikszentmihalyi, former head of the department of psychology at the University of Chicago wrote about the ‘autotelic’ experience in his book, Flow. In it, he describes the key element to an optimal experience is that the experience is an end in itself. In other words, the enjoyment of the experience is derived from the experience in and of itself. The term ‘autotelic’ comes from the Greek auto (self) and telos (goal or purpose). “It refers to a self-contained activity, one that is not done with the expectation of some future benefit, but simply because the doing itself is the reward” (Csikszentmihalyi, 1990, p.67). This is contrasted with what is referred to as an ‘exotelic’ experience. When an experience is autotelic, the reward of the experience is the experience itself, when an experience is exotelic, the attention becomes fixated on its consequences.

During his Ph.D. research, Csikszentmihalyi observed that painters were so engaged in their process that it was almost as if they had entered a trance. For these
people, their perspective on time changed—it appeared to pass by much more quickly and their sense of self-consciousness disappeared. In later research, people reported similar experiences in a vast array of pursuits such as: rock climbing, spelunking, soccer players, and swimmers. From this, Csikszentmihalyi began describing these optimal experiences people were having as being in a state of ‘Flow.’

“The highest, most satisfying experiences in people’s lives were when they were in flow. And this previously unacknowledged mental state, which seemed so inscrutable and transcendent, was actually fairly easy to unpack. In flow, goals are clear… Most important, in flow, the relationship between what a person had to do and what he could do was perfect. The challenge wasn’t too easy. Nor was it too difficult. It was a notch or two beyond his current abilities, which stretched the body and mind in a way that made the effort itself the most delicious reward. That balance produced a degree of focus and satisfaction that easily surpassed other, more quotidian, experiences. In flow, people lived so deeply in the moment, and felt so utterly in control, that their sense of time, place, and even self melted away. They were autonomous, of course. But more than that, they were engaged.”

(Pink, 2009, p.113)

These intrinsically inspired flow experiences are not just reserved for people working in creative fields or participating in physical activities. In a 2008 study the National Bureau of Economic Research compiled data on over 11,000 industrial scientists and engineers and found that “individuals’ motives have significant effects upon innovative effort and performance…Overall, intrinsic motives, particularly the desire for intellectual challenge, appear to benefit innovation more than extrinsic motives such as pay” (Sauermann, 2008, et. al.).
Teresa Amabile, a professor at Harvard Business School, who researches the interrelationships of creativity, productivity, and the psychology of everyday work life states, “The desire to do something because you find it deeply satisfying and personally challenging inspires the highest level of creativity, whether it’s in the arts, sciences, or business.”

Entering into a flow state is essential for developing mastery; however, it does not guarantee it. Flow occurs in short periods of time—seconds, minutes, maybe hours. On the other side, mastery takes years—even decades to achieve. So, how to negotiate harmony between the two concepts in the work place? A collection of behavioral scientists have suggested that mastery obeys three different laws: Mastery is a mind-set, a pain, and it is impossible to fully realize.

Carol Dweck, a psychology professor at Stanford University asserts that the general population holds two differing views on intelligence. The first view is referred to as the “entity theory.” Those who hold to this believe that intelligence is fixed within a person and it cannot increase. On the other side of the coin is the “incremental theory.” This theory contends that intelligence is pliable and, through concentrated effort, it can be increased. These two theories lead down very differing paths, but only the incremental theory leads a person towards mastery (Pink, 2009, p.119).

Dweck explains that, “although people may differ in every which way— in their initial talents and aptitudes, interests, or temperaments—everyone can change and grow through application and experience.” Her research has consistently demonstrated that people with fixed mind-sets miss out on opportunities for improvement while those who
have a "growth mind-set" watch their abilities move ever upward (Achor, 2010, p.76).

Some of Dweck’s more well-known studies relate to goals. Dweck states that goals come in two varieties, performance goals and learning goals. For example, getting an A in French class is a performance goal, while being able to speak it is a learning goal. Dweck discovered that giving students a performance goal such as getting an A on a test inhibited their ability to apply the concepts to new situations. In one study, Dweck asked a junior high students to learn a set of scientific principles. Half of the group was assigned a learning goal, while the other half was assigned a performance goal. When researchers asked the students to apply the knowledge to a new set of problems, students with the learning goals scored significantly higher. (Pink, 2009, p.120)

In another study, Dweck’s team tested 373 students at the onset of seventh grade to determine whether they had a fixed or a growth mind-set. Next they tracked the students academic achievement during the following two years and find that their mind-set had a large effect on math achievement. Those students who held to the belief of a fixed mind-set maintained their GPA, while the other students who held to a growth mind-set experienced an improvement in their GPA. Quite simply, those with the belief that they could improve, did. (Achor, 2010, p.77)

New hires may have a disposition to either a fixed mind-set or a growth mind-set; however, what they come in with isn’t near as important as what environment they work in every day. It is important for leaders to nurture a growth mind-set. This means that leaders must invest in the growth and development of their employees by challenging them with regular work and projects that are outside of their direct area of expertise. They have to find a delicate balance between learning and performance in order to optimize the team. People must be challenged to work on something they haven’t already
mastered. (Glick, 2006, p.76)

While people may enter a job or career with one type of thinking or the other, either one can be propagated in the professional environment; however, only one will lead to greater satisfaction at work—which consequently leads to ever-improving work.

Mastery.

Mastery of any endeavor, be it a creative endeavor, a sport, a musical instrument—requires diligent effort and practice over a very long period of time. Mastery does not occur within a week, or a month, or even a year, it takes a minimum of a decade of practice. George Leonard, past-president of the Association for Humanistic Psychology as well as a noted American writer, editor, and educator wrote extensively on the subject in his book ‘Mastery: The Keys to Success and Long-term Fulfillment.” His words echo those of Csikszentmihalyi’s research on flow:

“Goals and contingencies, as I’ve said, are important. But they exist in the future and past, beyond the pale of the sensory realm. Practice, the path of mastery, exists only in the present. You can see it, hear it, smell it, feel it. To love the plateau is to love the eternal now, to enjoy the inevitable spurts of progress and the fruits of accomplishment, then serenely to accept the new plateau that waits just beyond them. To love the plateau is to love what is most essential and enduring in your life.” (Leonard, 1991, p.48–49)

In an article by K. Anders Ericsson for the Harvard Business Review titled, The Making of an Expert, Ericsson states:

“To people who have never reached a national or international level of
competition, it may appear that excellence is simply the result of practicing
daily for years or even decades. However, living in a cave does not make you a
geologist. Not all practice makes perfect. You need a particular kind of practice—
deliberate practice—to develop expertise. When most people practice, they focus
on the things they already know how to do. Deliberate practice is different. It
entails considerable, specific, and sustained efforts to do something you can’t do
well—or even at all. Research across domains shows that it is only by working at
what you can’t do that you turn into the expert you want to become.” (Ericsson,
2007)

Ultimately, mastery is a sustained effort showing little to no improvement over a
long period of time, perhaps with fleeting instances of Csikszentmihalyi’s flow along the
way. To master a pursuit is to love the process of whatever that pursuit is. Only by loving
the process and not becoming fixated on extrinsic end-goals can someone hope to become
masterful at their chosen discipline.

asymptote.

The nature of mastery is an asymptote. “You can approach it. You can hone in on
it. You can get really, really, really close to it. But.... you can never touch it” (Pink, 2009,
p.125). Thus, mastery is much like the algebraic asymptote, a curved line that approaches
but never reaches a straight line (fig. 2).
People on a journey of mastery, regardless of practice often say the same thing—that they must become better. They say it when they’re starting out, they say it after years of practice, and they say it after their best performance, or finest season. Despite their admirable determination, they also know that they will never achieve it, that it will ultimately always be just one step ahead, ever so barely eluding them.

Why do people continue to pursue mastery even when it is impossible to reach? The answer is grounded in Csikszentmihalyi’s research. People do it because they find the joy in the pursuit of the task itself. “Mastery attracts precisely because mastery eludes” (Pink, 2009, p.125).

**Purpose**

The science shows that people in an autonomous environment working towards mastery perform and achieve at very high levels. However, there is one more component to properly balance the motivation equation—purpose. The most motivated individuals work in the service of some greater objective connecting their desires to a cause more important than themselves. “Purpose,” psychologist Mihaly Csikszentmihalyi told author
Pink, “provides activation energy for living.”

Although heavily neglected and dismissed in the past, this purpose motive is rapidly being realized as a key differentiator by entrepreneurs, executives, and investors. The best performing companies, “stand for something and contribute to the world” (Pink, 2009, p.133). Not to say that these companies reject profits; however, they simply place an equal emphasis on purpose maximization.

In a study conducted with soon-to-be graduates at the University of Rochester, Edward Deci, Richard Ryan, and Christopher Niemiec asked a sample of these students about their life goals following graduation. During the initial phase of the study, Deci, Ryan, and Niemiec classified the students’ aspirations into two camps: extrinsic aspirations (profit goals) and intrinsic aspirations (purpose goals). Two years later they tracked down the same students to see how their post-graduate life was progressing. The students with purpose goals reporter higher levels of satisfaction and subjective well-being than when they were in college. They also were less likely to suffer from anxiety and depression, proving the benefit to overall well-being. The post-graduate students with profit-oriented goals had quite a different feeling about the current state of their lives. Those who felt they were achieving their goals of accumulating wealth and acclaim reported levels of satisfaction and well-being no higher than when they were students. Simply put, despite achieving their goals, they were no happier. Additionally, graduates with profit goals showed increases in anxiety and depression in spite of achieving their goals. (Pink, 2009, p.142)

The purpose motive, as defined by Pink, is comprised of three separate factors in organizational life—goals, words, and policies.
goals.

In organizational life people need goals that are purpose oriented, not profit oriented. In 2009, Sylvia Hewlett’s research found, “More and more, those interests and passions center around social responsibility as the children of the “Me” generation develop into a “We” generation. Half of all boomers and a third of Ys regularly volunteer — and give substantial amounts of time (on average 10 hours a week). More than 80 per cent of both boomers and Ys want employers to get involved and are looking for opportunities to give back through work...they are redefining success — and are willing to accept a radically “remixed” set of rewards.” Furthermore, both generations rate five other forms of compensation as being at least as important as money, if not more so. Those other forms of compensation include: new experiences, a great team, flexible work arrangements, recognition for good work, and the ability to give back to society through work. (Hewlett, 2009)

For example, the company TOMS Shoes which launched in 2006, promises to give away a pair of shoes to a child in a developing country for every pair of shoes they sell. The companies’ business model turns customers into benefactors (Pink, 2009, p.134). Companies like TOMS are appearing more and more frequently defining a new category of “not only for profit” businesses. Their objective is to seek purpose in their work and to apply profit as the catalyst instead of the objective. (Pink, 2009, p.133–135)

words.

Often in the context of business, people are quick to describe and obsess over “how.” Such as, how to do something. Less often the word “why” is used to discuss topics. Such as, why something is being done.
“People at work are thirsting for context, yearning to know that what they do contributes to a larger whole. And a powerful way to provide that context is to spend a little less time telling how and a little more time showing why.” (Pink, 2009, p.138)

**policies.**

As research continues to trickle in from psychologists and economists there is clearer and clearer evidence that the correlation between money and happiness is weak. Past a certain level, more money doesn't bring people any more satisfaction.

Bill Strickland, founder of the Manchester Craftsman's Guild in Pittsburgh, Pennsylvania states, “The value of a life can be measured by one’s ability to affect the destiny of one less advantaged.”

In a study conducted by Lara Aknin and Elizabeth Dunn, sociologists at the University of British Columbia, and Michael Norton, psychologist at Harvard Business School, results have shown that how people spend their money is at least as important as to how much they earn. “Providing converging evidence for this hypothesis, we found that spending more of one's income on others predicted greater happiness both cross-sectionally (in a nationally representative survey study) and longitudinally (in a field study of windfall spending).” (Aknin, 2008, p.1687)

In an article for the Boston Globe, Dunn is quoted as stating, “Just because money doesn’t buy happiness doesn’t mean money cannot buy happiness. People just might be using it wrong.” To her point, in a study she helped conduct, her team surveyed 632 American's on their general happiness and looked at where their money was spent. What they found was that higher “prosocial spending” was directly correlated with higher-self reported happiness. Later, they followed this study up with a detailed analysis of sixteen
workers before and after they received their yearly bonus. The only factor they found that reliably predicted worker happiness 6–8 weeks later was their prosocial spending. “the more money people spent on charity and gifts for others, the happier they were” (Benette, 2009).

Another study conducted in 2009 combines the idea of Google’s 20 percent time with the purpose motive. Physicians engaged in high stress work at the prestigious Mayo Clinic in Phoenix, Arizona who were permitted to spend one day a week working on whatever aspect of their job was most meaningful to them. Those physicians who participated in the study had half the burnout rate of those who did not. (Pink, 2009, p.140–141)

The correlation of this research to creative endeavors such as design is clear. People engaged in creative professional pursuits are motivated not by financial reward, as many businesses perceive them to be. In fact, those individuals engaged in creative work thrive in environments that allow them to practice their craft passionately, without the shackles of micro-management. These impassioned people provide their best work under circumstances that allow them to pursue mastery of their discipline and with the opportunity to find some unique way of giving back to a cause greater than themselves. The science and research confirms what humans intrinsically already know.
CHAPTER IV

Teams

As a result of the individualistic view of western culture, there is a strong tendency to believe in the solitary nature of achievement. Stanford psychologist Carol Dweck demonstrates this misconception to her students every semester by asking them to describe some of history’s greatest minds at work. “When you think of Thomas Edison, what do you see?” she asks them. Inevitably students respond by painting a scene of Edison working alone as a recluse—which couldn’t be further from the truth. Edison actually created the light bulb with the help of 30 assistants (Achor, 2010, p.184).

The benefits of social interaction at work go far beyond group brainstorming sessions. “One study of 212 employees found that overall social connections at work predicted more individual learning behavior, which means that the more socially connected employees felt, the more they took the time to figure out ways to improve their own efficiency, or their own skill set” (Achor, 2010, p.184). In another similar study of over 350 employees in 60 business units found that the number one predictor of achievement in a team was how the members felt about each other (Achor, 2010, p.185).

Although there have been significant leaps forward in technology and in digital communications, there are still significant social and business barriers to the adoption of virtual team working (McCullagh, 2003, et. al.). Successfully managing a virtual team does not mean simply figuring out which is the best technology for the job. Human relationships are they backbone of any team, especially a virtual team. “Networks are enabled by technology, but they are held together by social ties” (McCullagh, 2003, p.5). With the previous chapter on motivating individuals in mind, this chapter will look at the components of high functioning teams and how great leadership can create the space
for the development of trust and healthy working relationships, which are paramount to creating new and innovative work.

**Leadership**

Leadership needs to be recognized and developed as part of a designer’s professional progression and design organizations need to build a culture of leadership (Han, 2010, p.21). As tasks become more and more complex and specialized, leading a multi-functional team is rapidly becoming a specialist role in and of itself. When the individuals who make up these groups are strong experts in a specific field (particularly one in which the leader is not well versed) leaders must learn to assess the team members motives, satisfy each individual’s needs, and treat them as full human beings. Working with these highly motivated experts, leaders in this position have to transition to a process of facilitating individual and collective efforts. “Yukl (1998) observes that team leadership influences and teaches others to understand both why and how certain activities and goals need to be accomplished for the benefit of the team. As such, it constitutes a process of facilitating individual and collective efforts to learn and accomplish shared goals in organizations” (Han, 2010, p.23). Leadership is the job of management, and there tends to be a cultural misconception that the great leaders are larger-than-life saviors with big personalities. Great leaders, however, are self-effacing individuals who display great resolve to do whatever is needed to be done. Through the extensive research of Jim Collins and his team for the book, “Good to Great,” they found that great leaders exhibit a peculiar set of qualities. In trying to identify what attributes exhibited in companies that are able to make the transition from “Good to Great,” Collins insisted that his team ignore the executives in charge. The research team;
However, pushed back citing the unique qualities of the leaders of these wildly successful companies. In the end, according to Collins, “as should always be the case—the data won.” Their findings were consistent across the board, it didn’t matter what type of company it was, or what state it was in, what they found exhibited in the leaders of “Good to Great” companies was universal. From these empirical findings he coined the term “Level 5 Leader”, and defined the traits of such a person (Collins, 2001, p.21–22).

**Level 5 leadership.**

Level 5 leadership breaks the mold of prevalent beliefs about leaders. These leaders display an uncanny duality of humility and will. They contrasted their counterparts in how they talked about themselves and their contributions. They rarely discussed themselves in interviews and tended to deflect when the conversations would veer towards their own contributions. These feelings were echoed by former Herman Miller CEO, Max DePree when discussing leadership. He felt that leadership is more about stewardship than it is about ownership. To DePree a leader is “one who serves.” They serve the people whom they work with, helping to break down barriers that get in the way of other people doing their jobs, as well as serving their company or institution (DePree 1989, p.17–20). The humbleness of these people was not just a sense of false modesty either. Those who worked with these leaders continually used words like “quiet, humble, modest, reserve red, shy, gracious, mild-mannered, self-effacing, understated” (Collins, 2001, p.27) Good-to-great leaders researched never displayed the desire to be placed on a pedestal—they simply were ordinary people producing extraordinary work.

Humility is not the end-all-be-all of a leader producing extraordinary work. Great leaders also have an unwavering resolve to do the job—and to do it right. These are very
driven people with an insatiable desire to garner results. They will stop at practically nothing to enable their employees and make their company great (fig. 3). These leaders make it a point to be responsible for effectiveness. Peter Drucker explains that, “efficiency is doing the thing right, but effectiveness is doing the right thing” (DePree, 1989, p.19). Effectiveness as a leader is manifested through enabling others to reach their potential, both personal and professional. This is particularly important when dealing with people working in a creative profession. As discussed in detail later in this thesis, creative people love being engaged in the pursuit and mastery of their craft simply for the enjoyment of the work itself. “They crave the feeling of accomplishment that comes from cracking a riddle, be it technological, artistic, social, or logistical. They want to do good work. Though all people chafe under what they see as bureaucratic obstructionism, creative people actively hate it, viewing it not just as an impediment but as the enemy of good work” (Florida, 2005, p.126).

Fig. 3: Level 5 Leadership Chart (Collins, 2001, p.20)

<table>
<thead>
<tr>
<th>Level 5 Executive</th>
<th>Level 5 Executive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Builds enduring greatness through a paradoxical blend of personal humility and professional will.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 4 Effective Leader</th>
<th>Level 4 Effective Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalyzes commitment to and vigorous pursuit of a clear and compelling vision, stimulating high standards</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 3 Competent Manager</th>
<th>Level 3 Competent Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizes people and resources toward the effective and efficient pursuit of predetermined objectives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 2 Contributing Team Member</th>
<th>Level 2 Contributing Team Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributes individual capabilities to the achievement of group objectives and works effectively with others.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 1 Highly Capable Individual</th>
<th>Level 1 Highly Capable Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makes productive contributions through talent, knowledge, skills, and good work habits.</td>
<td></td>
</tr>
</tbody>
</table>
A great leader is an individual who blends extreme personal humility with intense professional will. These leaders don’t attempt to control people, they release people from their constraints and help them to manage themselves.

**FIG 4. SUMMARY, TWO SIDES OF LEVEL 5 LEADERSHIP (COLLINS, 2001, P.36)**

<table>
<thead>
<tr>
<th>PROFESSIONAL WILL</th>
<th>PERSONAL HUMILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creates superb results, a clear catalyst in the transition from good to great.</td>
<td>Demonstrates a compelling modesty, shunning public adulation; never boastful.</td>
</tr>
<tr>
<td>Demonstrates and unwavering resolve to do whatever must be done to produce the best long-term results, no matter how difficult.</td>
<td>Acts with quiet, calm determination; relies principally on inspired standards, not inspiring charisma, to motivate.</td>
</tr>
<tr>
<td>Sets the standard of building an enduring great company; will settle for nothing less.</td>
<td>Channels ambition into the company, not the self; sets up successors for even greater success in the next generation.</td>
</tr>
<tr>
<td>Looks in the mirror, not out the window, to apportion responsibility for poor results, never blaming other people, external factors, or bad luck.</td>
<td>Looks out the window, not in the mirror, to apportion credit for the success of the company—to other people, external factors, and good luck.</td>
</tr>
</tbody>
</table>

**roving leadership.**

A great leader must also leave space for members of the team to develop and move in and out of what Max DePree, former chairman and CEO of Herman Miller, calls “Roving Leadership.” In organizations there is the possibility of having two types of leaders; there’s the familiar hierarchical leaders, and then these roving leaders who take charge, in varying degrees over organizational resources based on their own expertise. Roving leaders emerge among confident hierarchical leaders who have a special openness that allow them to share ownership of problems—essentially allowing others to take
Roving leadership has also been referred to in other research as, “shared leadership,” “distributed leadership,” “collective leadership,” and “peer leadership.” The concept first emerged in the work of Mary Parker Follett in 1927. She proposed that shared leadership is “a fait accompli, “…a system based neither on equality not on arbitrary authority, but on functional unity” (Ubell, 2010, p.31). In virtual teams, roving leadership occurs based on a combination of the situation and skill sets of the individuals within the team. It recognizes that a single leader will likely not be able to fulfill all of the necessary leadership roles and thus confers the status and responsibility on various team members often resulting in stronger team cohesion (Ubell, 2010, p.31).

This is no easy task. It’s a demanding of all people involved, the hierarchical leader, the roving leader, and even the followers. It demands discipline that each of these people become enablers of each other. Leadership should not be handled carelessly, but shared in a way where everyone can count on the special competencies of an individual when the time is right. Work that is shared among a contingency of many different experts requires that each acknowledge the interdependency of all parties involved to successfully achieve the goals of a project (DePree, 1989, p.48–51). “By promoting shared leadership, virtual team leaders encourage more active exchange between team members and, just as important, allow peer-to-peer influence to deepen the teams qualities” (Ubell, 2010, p.32).

“The condition of our hearts, the openness of our attitudes, the quality of our competence, the fidelity of our experience—these give vitality to the work experience and meaning to life. These are way it takes to make roving leadership possible.” (DePree, 1989, p.50–51)
perceived organizational support.

The leader must empower the team members to recognize their own value and create an environment that provides support for each individual member. This behavior builds the foundation for members to develop stronger cohesion within the group based on this ‘perceived organizational support.’ “Perceived organizational support acknowledges the importance of employees’ perception of the value the organization places on their efforts.” (Ubell, 2010, p.26) This is measured at the individual level and reflects the commitment each individual has towards his or her organization or team. This commitment is evaluated at three levels—continuance (need to), normative (ought to), and affective (want to).

Continuance Commitment: The lowest level of commitment, this level is geared primarily at the economic level and is seen as the “need to” maintain the working relationship primarily for economic purposes. (Ubell, 2010, p.26)

Normative Commitment: Next in the hierarchy, the normative level, engenders the individual to perceive an obligation to the organization. There may be any number of reasons for this, but the individual feels he or she “ought to” maintain the working relationship. (Ubell, 2010, p.26)

Affective Commitment: This is the highest level of allegiance to an organization whereby workers are emotionally committed to an organization. Here, workers “want to” maintain their connection and ties to their workplace. (Ubell, 2010, p.26)

Perceived organizational support asserts that at the highest level, workers will be rewarded more than just financially, but also with recognition and approval. This
recognition of the employee’s value creates a strong and important sense of belonging, the effects of which are far reaching. Organizations and companies that are able to engage people at the Affective Commitment leave are most likely to garner the greatest commitment from their employees (Ubell, 2010, p.27). These high levels of worker engagement and involvement mean happier, healthier, more productive workers who produce and deliver quality creative work, which in turn generates greater value for the company.

Communication and Trust

“Creativity and productivity are optimized when there is an equitable tension, respect, and trust among stakeholders—a balance of structure, or process, and autonomy; of boundaries and expansive thinking; of active management and self-direction; of homogeneity and diversity.” (Ind, 2006, p.41)

Successful collaboration regardless of location or distance requires that all key stakeholders work together. This unified effort relies upon open and honest communication among all parties involved. Good communication among team members is the foundation for creating trust in any work environment, and it is profoundly important in a virtual team. Good communication means a respect for individuals. Just any like healthy relationship requires regular, open, and honest communication, so too do the relationships within a company, no matter the size.

The act of regular communication leads to trust. Trust leads to the development of strong, healthy relationships. It is these strong relationships that facilitate the development and growth of creative culture, which in turn produces stronger innovation—the keystone of competitive differentiation. Healthy relationships built on
communication and trust provides people with the space to respond to demands and act on their responsibilities. “Better relationship-building increases communication, cooperation, motivation, group diversity, and operational efficiency, reduces costs, and promotes creativity...The strategic value of such a culture is immense.” (Watt, 2000, p.47) Not only are strong relationships built on trust and communication important to achieving results, they’re also a key element to the subjective experience of being a team member. Additionally, before being able to establish trust with clients and vendors it must first be established within the bounds of the team aggregated around a project.

“The value of trust was an important finding of the Global Virtual Team project, an annual study led by Sirkka Jarvenpaa, a professor at the University of Texas. During the 1997 study, faculty and students from universities around the world collaborated for eight weeks on a software development project, communicating only by e-mail. Jarvenpaa concluded that if team members don’t meet in person at the outset, they should at least exchange get-acquainted messages. Teams that did so had more overall communication during the project. They regularly discussed goals and schedules, helped one another meet them, were quicker to confront nonperformers, and were more likely to get their work done on time” (Wardell, 1998, p.3–4).

When dealing with virtual teams, trust must be established quickly, and early on. There are three actions of the team members that affect trust: competence, integrity, and concern (Shaw, 1997, et. al.). Each of these actions must be consistently maintained in order for team members to trust in one-another.

**competence.**

Team members must believe that they are working with others who produce
results. Competence is strengthened in teams by an individual’s reputation, follow-through, and ability to acquire resources. In some cases, people will enter into virtual team environments with a reputation that precedes them. This can be a good starting point for establishing competence—especially when introducing a new team member, but the importance of timely follow-through on responsibilities cannot be overstated. Not delivering on a promise erodes trust rapidly. In the context of virtual teams this may be even more important as other team members have less signs that an individual is committed to the team. Consistently setting realistic goals and expectations and meeting them engenders trust among team members. On the occasions when a team member is unable to keep a commitment or achieve a milestone, they should be up-front about why and explain it to the team and they should do it as soon as possible. Waiting to explain the problem will only lead to a more dire situation and if presented to the team early enough, other team members may be able to assist and mitigate the issue. Resource acquisition helps to support perceived competence in a team as well. Highly functioning teams and team members don’t wait for resources to be handed to them. They actively seek out and track down the pieces they need to get their job done. Team members who manage to produce resources strengthen their perception of trustworthiness (Duarte, 2006, p.146–147).

**integrity.**

“Integrity, the alignment of actions and stated values, creates a foundation for trust” (Duarte, 2006, p.147). When members do not act in a manner consistent with their stated intent it does not inspire high levels of trust. This is perception is compounded in virtual environments when conflicting behavior cannot be placed into the context
of external factors. There are two behaviors that strengthen integrity in a team; standing behind the team, its members, and work; and maintaining dependable, regular communication (Duarte, 2006, p.147).

Team members and leaders should always advocate for the team, the members, and the work—in good times and in bad. Speaking poorly about any of these can quickly dissolve trust and decrease performance. If team members have issues with each other, they should address the issue directly and if the intervention of a leader is required, the leader should never assume poor performance without meticulously reviewing and investigating the situation (Duarte, 2006, p.147).

Regular communication among team members is a key factor in maintaining and building trust. Team members should be encouraged to keep up with one another both professionally and personally. The reasons for professional communication are apparent—it is necessary for keeping projects moving forward, ensuring that milestones are met and generating successful solutions. Providing a supportive environment where team members can regularly make use of communication technologies to converse about non-work related topics is also very important. With virtual teams the opportunity for conversation at the water cooler is gone and consequently, so is the opportunity to develop personal relationship with other team members. Keeping a variety of means and methods available to the team to converse and communicate will help instill a similar sense of connection that will hopefully lead to meaningful personal relationships despite the possible physical distance.

Concern.

Creating an environment of inclusion helps build rapport and relationships
among team members. Group activities outside of the office and work when possible help build strong bonds. Lyle Zimmerman of Optima Design says, “We want our people to be fulfilled and happy, and we’ve become like an extended family. We care about them as individuals, not just as employees. It’s all about quality of life.” (Archer, 2006, p.16)

Clearly this can be complicated when dealing with a geographically dispersed team, but with a little effort there are ways to provide similar experiences. When teams kick off projects it is ideal that as many team members as possible meet in person to begin the project as well as meet with the client. There are opportunities here for non-work related socializing at this time to help strengthen the inter-personal relationships.

When new team members are added, current members and leadership should help to transition the new recruits and make them feel welcome. Every owner, partner, or person in charge of hiring interviewed for the primary research of this thesis stated that they would require new hires to work at the main office location for a period of time before allowing them to work remotely. These people in charge of hiring felt very strongly about fully transmitting the culture of the company at a physical location. Most felt that a few months (3–6) would be adequate for this transition. Others were comfortable with only a few weeks before allowing the new hire to work virtually.

The amount of time necessary to transition a new hire into the company culture is not fixed, and should be decided by what the feels best for that specific company and possibly even what feels best for that specific hire. Some hires may actually want to spend more time working in a co-located fashion to learn the skills necessary, while others may require less time.

Communication leads the way to trust, which is imperative for a virtual team
to have available. With trust in hand, people are able more cooperative, motivated, and creative. All of which promote operational efficiency and the development of exceptional creative work. As trust expands throughout a team, healthy working relationships can begin to develop.

**Relationships**

Intense questioning, disagreement, and investigation of ideas are all critical to developing creative and innovative solutions. Operating under an atmosphere of mutual respect and social consciousness allows team members to express uninhibited creativity. “One characteristic of any strong relationship is the ability of parties to question and debate with one another” (Watt, 2000, p.50). With trust established, relationships will begin to develop and creative teams are much more likely to feel comfortable in the intense questioning, disagreement, and investigation of ideas. This comfort is paramount to developing creative ideas and solutions. Without it, people are less likely to both provide genuine and authentic feedback, as well as be open to receiving feedback about their work.

In the short-term, strong relationships facilitate “buy-in” and motivation. This passionate investment positively impacts creativity making team members feel valued, challenged, and stimulated. With a stronger sense of project ownership they will push themselves and their ideas further. This collective drive among team members also increases the likelihood of successful implementation of ideas (Watt, 2000, p.48). When team members trust in each other, the ability to quickly develop and implement creative ideas becomes rapidly more efficient. The long-term benefits of these small creative pushes will also ensure regular personal and professional learning and growth leading to
greater satisfaction.

In 1999 when Gallup asked ten million employees around the world if they could agree or disagree with the following statement: “My supervisor or someone at work, seems to care about me as a person,” they found that those who agreed were more productive, contributed to more profits, and were more likely to stay long-term at their place of employment (Achor, 2010, p.189).

Developing relationships can be a challenge in virtual team settings; however, if at all possible, time and budget should allow for initial kick-off meetings to be held face-to-face. This practice helps bring all key members together (clients included) to get a clear sense of the project’s context, objectives, and team members. Meeting helps rally team members around the common purpose of the project and build credibility with each other. (McCullagh, 2003, et. al.) Time should be allotted during travel and before/after meetings to allow team members to socialize and get to know each other more personally. Many people interviewed for this thesis remarked on many fond memories of non-work related social time during travel and cited those as being crucial to the development of their relationships with co-workers. “Familiarity breeds trust, and remote workers need to feel connected” (McCullagh, 2003, p.x).

connections and vulnerability.

Social contact in a work environment does not always need to be deep to effectively make a difference to work performance and job satisfaction. Brief encounters can create high-quality connections, which “fuel openness, energy and authenticity among coworkers, and in turn lead to a whole host of measurable tangible gains in
performance” (Achor, 2010, p.185). In an scenario where employees primarily work virtually, this is great news. Jane Dutton, a psychologist at the University of Michigan Business School asserts that “any point of contact with another person can potentially be a high-quality connection. One conversation, one email exchange, one moment of connection in a meeting can infuse both participants with a greater sense of vitality, giving them a bounce in their steps and a greater capacity to act” (Dutton, 2003, p.2).

To observe the benefits of social ties in the workplace, MIT researchers spent a year following and studying 2,600 employees at IBM. They analyzed their address books and buddy lists and found that the more socially connected employees were, the better they performed. They found that on average, every e-mail contact someone had in their address book was worth an added $948 in revenue. As a result of these findings, IBM wisely invested by initiating a program at one of its offices to facilitate introductions among employees who didn’t know one another. (Achor, 2010, p.185)

Brené Brown, Ph.D., LMSW is a research professor at the University of Houston Graduate College of Social Work. She has spent the past decade studying vulnerability, courage, worthiness, connection, and shame. In both her 2010 TEDx Huston talk “The Power of Vulnerability”, and here 2012 TEDx talk, “Listening to Shame,” Brown discussed the findings of her research and its implications on creativity, as well as everyday life. Her research indicates that humans are neurobiological wired to feel connections with other humans. Having these connections with others allows people to fully embrace vulnerability—which is an important factor in the creative process. “Vulnerability is the birthplace of joy, creativity, belonging, and love… To create is to make something that has never existed before. There’s nothing more vulnerable than that” (Brown TED TALK). Having workers who feel comfortable being vulnerable means they are comfortable
making mistakes, and making mistakes is a key part of the iterative aspect of the creative process. The more comfortable of a social environment a company can provide their creative staff, the more likely they are to encourage experimentation, which leads to unique creative solutions and innovations.

In order to reap the benefits of uninhibited creativity from a worker who is comfortable enough with her colleagues and co-workers to be open and vulnerable requires a unique type of leadership. It requires leadership of someone who blends humility with intense personal will and someone who that encourages regular open, honest communication to develop trust among workers. A team built of strong relationships will be able to create cutting edge creative work, regardless of distance and location, providing immense value to both their employer and their clients.
CHAPTER V
Collaborative Aspects of the Design Process

The Creative Problem Solving Process

Every studio, agency, firm, freelancer, and individual has their own creative process that is both inherently unique, and in a broad sense, also universally the same. While the firms and agencies who were interviewed for this study each had their own approaches to problem solving and design process, this similarity across the board as well as comparing them with design processes written about in books and articles, everyone follows a fairly standard series of steps—although the naming convention may vary from place-to-place and person-to-person. This suggests that there is a common thread to how people and teams go about creative problem solving. While creative problem solving has certainly gone on since the beginning of humankind, it was first outlined and published by Alex Osborn in 1953, and further refined through collaboration with Sydney Parnes. Since then the process has essentially stayed the same, although existing under different names and steps.

Osborn was one of the founding members of BBDO, one of the oldest agencies still existing in the United States. The agency began in 1891 with George Batten’s Batten Company, and later in 1928, through a merger with BDO (Barton, Durstine & Osborn), the agency became BBDO. Osborn was a pioneer in the creative field professionally as well as academically. In 1954 he founded the Creative Education Foundation which presently operates as a non-profit organization of leaders in the field of creativity theory and practice. Just before founding the CEF, Osborn published Applied Imagination, arguably the first book to discuss the Creative Problem Solving Process as well as the concept of brainstorming.
The Osborn-Parnes Creative Problem Solving Process was defined in Osborn’s 1953 book, Applied Imagination, and further developed through Osborn’s collaboration with Parnes. Osborn and Parnes conducted extensive research on the steps individuals and teams go through when attempting to solve problems. From this research, they found that they go through 3 stages, which can be broken into 6 separate steps. The first stage is exploration, it contains the steps of objective finding, fact finding, and problem finding. The second stage is the ideation phase, which includes the step of idea finding. The final stage is the action stage, and that includes the steps of solution finding and acceptance finding.

FIG. 5: OSBORN-PARNES CREATIVE PROBLEM SOLVING PROCESS
Since this model is essentially the grandfather of all creative process models in use today, it will serve as the foundation for analysis in this thesis. When viewing how these steps translate to a team working virtually, many of these steps are easily accomplished by individuals working asynchronously. Team members provided with the right environment can easily go about completing tasks in all of the steps during the Exploration Stage as typically these are tasks that require individual as opposed to group attention. The challenge occurs when trying to collaborate virtually within the ‘Idea Finding’ steps. During these steps, there is immense value in synchronous collaborative ideation. Analyzing the nature of a traditional co-located studio environment reveals the value of such collaboration.

In a traditional co-located studio, the physical space is a key component for the design process as, in ideal circumstances, it supports free exploration of materials and representations, analogue or digital, without constraints. The collaborative nature of the studio is a creative lever to the process of such exploration. The introduction of new digital communication technologies into the studio environment has been met with mixed results. “Paradoxically, the use of portable computers, using the Internet as collaboration channel, has actually individualized the design work and limited the support to co-creation, reinforcing individual work” (Dorta, 2011, p.271). Two people sharing ideation from their respective computer screens does not replace the studios’ collaborative exchanges and group synergy. The value in this portion of the creative process comes from ideation and iteration through incomplete ambiguous sketching, communication and dialogue that exists among the team members engaged in a critique setting.
Ideation and Iteration

Ideation and iteration fall within the ‘Idea Finding’ and ‘Solution Finding’ steps of Osborn’s CPS process and they are the two key components of the design process that do not make the leap into the digital realm particularly successfully. Designers require “qualitative and imprecise external visualizations to interact with their mental images” (Dorta, 2007, p.123). Essentially, these external visualizations are simplified as sketches, but could also be models, wireframes for interactive designs, or other such loose phases during the early portion of the process. Designers are constantly interacting with these representations to help them make their design decisions. On an individual level, working with these representations becomes a dialogue or conversation the designer is having with herself, in a group or critique settings these sketches become a visual conversation both with the self and with other participants. Sketching produces imprecise ideas on paper which is largely beneficial to both the designer and her collaborators as designers typically read more in the sketches than they put in when they make them (Schön, 1985, et. al.). “Designers work with incomplete information, making assumptions and provisional decisions that need to be revisited and reviewed. Imprecision (flexibility), ambiguity (alternative meanings) and abstraction (simplification) characterize the relationship between the actual and the possible solutions” (Dorta, 2007, p.123). This is the birthing place of new and innovative ideas, and consequently it is not a step that should be removed from the process because synchronous collaboration in a virtual team is a challenge.
Since ideation and iteration are the foundation upon which innovative solutions are built, it’s important to look at how they work as part of the creative process. In his book ‘The Design Studio: An Exploration of its Traditions and Potentials’, Donald Schön calls this process of creative ideation ‘reflection-in-action.’ Schön describes the process as beginning with ‘knowing-in-action’ which is the utilization of routine responses that skillful practitioners bring to their practice. “It can be seen as consisting of strategies of action, understanding of phenomena, ways of framing the problematic situations encountered in day-to-day experience” (Schön, 1985, p.24). These responses are acquired through training and experience and are typically tacit—implicit, and executed seemingly instinctively. This process works as long as the situation falls within the confines of routine. “It is a dynamic knowing process, rather than a static body of knowledge” (Schön, 1985, p.24).

During this process, there can be surprises that draws the practitioner outside of the routine responses. These surprises challenge the practitioner as they do not fit existing understandings, and consequently fall outside their areas of ‘knowing-in-action.’ When noticed, these experiences yield uncertainty and the practitioner cannot make sense of the situation.

These unique events “are associated with conflicting values, conflicting ways of framing the problem, and even conflicting paradigms of practice” (Schön, 1985, p.25). The combination of uncertainty, uniqueness, and value-conflict are what Schön refers to as the ‘intermediate zones of practice.’

In the intermediate zones of practice, competencies change and require the practitioner to reflect both on the surprise of the process and their experienced ‘knowing-
in-action’ which provoked the surprise. The dynamic union of these reflections must take place in the ‘action-present’—which is a segment of time where thinking can affect the outcomes (Schön, 1985, p.25). “It has a critical function, questioning and challenging the assumptional basis of action, and a restructuring function, reshaping strategies, understanding of phenomena, and ways of framing problems.” (Schön, 1985, p.25)

This process of thinking begets a particular type of experimenting, unique to practice that occurs on the spot within the practice situation. “It consists in actions that function in three ways, to test new understandings (“What is going on here?”), to explore new phenomena (“What else looks odd here?”), and to affirm or negate the moves by which the practitioner tries to change things for the better (“How can we get this under control?”).” (Schön, 1985, p.25–26)

When the designer does not have the experience to mentally visualize and resolve design problems, or when the problem is too complex, these cognitive artifacts are essential to the ideation process. Ideation in collaborative teams requires the development of these cognitive artifacts to help the team visually communicate ideas and respond to the problem through improvisation. The creation of these visualizations is greatly important because the ambiguous nature of them allows both the team and individual to see unconsidered possibilities. This action, coupled with Shön’s ‘reflection-in-action’ is how new innovative solutions are crafted.

The difficulty creating and even sharing the visual representations in a digital environment at the initial phases is that often the programs and resources available to the designer require them to provide specifics about the design or sketch that precede their clarity about a concept or idea. “The problem with these representations is that they appear exact, so their perceptual interpretation space is very narrow (Stacey and Eckert,
2003” (Dorta, 2007, p.123). Despite a team’s best efforts, when seeing sketches or concepts defined in the digital realm it becomes difficult for them to critique the overall idea, rather than getting involved in the visual specifics. This problem has been defined as the Ideation Gap by Tomás Dorta.

**visual representations and the ideation gap.**

The design process contains an evolution of three types of visual representations, or sketching, according to researcher Gabriela Goldschmidt. Through the ideation phase, the first kind of sketching emerges as freehand sketches that serve individuals or teams to externalize their intentions. Next in the process are presentation-sketches. These sketches are made out of digital models, drawings, and images to clearly communicate with colleagues and clients. At the close of the process are detailed-sketches, these are intended to communicate exact and definitive information to create the finished form of the artifact. When people make the move to virtually sharing their creative work, it typically comes at the expense of the opportunity for ideation. Often team members will skip the valuable process of ideation sketching with others and move into high-fidelity digital renderings to share with their colleagues. This jump to defined visuals and prototypes as presentation-sketches before group ideation sketching limits the potential inherent in a co-creative problem solving process, likely damaging final outcomes. “Computers offer a limited, narrow, perceptual space ill-suited to ideation—which calls for inaccuracy, ambiguity and abstraction in order to foster reflexive conversation with the representatives” (Dorta, 2011, p.273).

In the act of designing, the ideation gap is the lack of support in relevant digital technologies to assist in generating innovative ideas and approaches. Plainly put, there
has been nothing that has been created digitally that can replace the process of sketching. The disconnect between the creative impulse and the workflow necessary to activate digital commands binds the designer to a process that starves her of the iterative process of design thinking (Dorta, 2008, p.122). Once the concept of a design has been identified through sketching, then and only then does technology become an irreplaceable partner of the designer.

**collaborative ideation.**

Design is a social process. It is done by groups of people acting together. It exists only in a collective sense. “Its state is not in the possession of any one individual to describe or completely define, although participants have their own individual views, their own images and thoughts, their own sketches, lists, diagrams, analyses, precedents, pieces of hardware, and now spreadsheets that they construe as the design.” (Buccarelli, 1988, p.161) In Buccarelli’s 1988 paper “An Ethnographic Perspective on Engineering Design”, he breaks the social process down into three types of discourse: constraining, naming, and deciding. These are further expanded upon by Dorta to include: negotiating and moving.

During the constraining portion of discourse, participants address a spectrum of concerns to frame the design problem. These concerns could be practically anything. These boundaries can be defined by items such as budget constraints, time frame, size, weight, user, expertise, deadlines etc. Naming is the act of identifying a common concern among participants. It helps to “define the ballpark so to speak, providing an arena for design moves with the context of […] the experience and competencies of participants” (Buccarelli, 1988, p.165). Intertwined with the process of naming comes negotiating. This
is where participants articulate the verbal meanings associated with their visual images and come to verbal clarity and agreement about what the names mean. Finally, the last two types of discourse are decision making and moving. During decision making the course of action to be taken is determined while the moving phase is the actual execution of the determined action. The first four of these actions usually take the form of a verbal exchange among or between participants. The final one, moving, is characterized by an act (Dorta, 2010, p.201).

In a 2010 study, Dorta and his team observed for the first time what he refers to as the Collaborative Ideation Loop (CI Loop). Here they identified a recurring pattern as a loop of design conversation. The loop begins with either a naming or constraining action and is resolved by either a decision making or moving action. “Gestures (pointing with hand or laser pointer, or through body movement) complement the verbal exchanges, but like design moves they also push the design forward (by drawing a new shape in the air, for example) (Visser, 2010)” (Dorta, 2010, p.201). These physical movements become clouded and lost when moving the critique process to a virtual setting, making co-creative ideation difficult to accomplish.

The value of the creative process is its ability to create previously unthought of and unconsidered solutions to a problem. One of the valuable ways in which this occurs is through the ambiguity of ideation and iteration done through sketching that occurs early in the process. Most teams working remotely tend to forego initial sketching phases due to lack of appropriate technology and the complications of various methods to work around this flaw. While there is currently no technology available that can replace the valuable face-to-face interaction among team members, the team can substantially improve their
ideation process by making a point of going through this initial phase, in spite of the challenge. Sharing loose sketches back and forth as quick photos or scans of their ideas before moving into presentation-sketches where parameters and design decisions become prematurely defined can salvage this important component of the creative process.
CHAPTER VI
CLOSING REMARKS

The primary idea behind this thesis has been to look beyond both the technological constraints and advantages to the deeper level of the human component in creating and sustaining healthy virtual creative teams engaged in design work. While there is no perfect solution, and execution of such teams is a formidable task, the outlook from this perspective is encouraging.

In the current state of technology, there is nothing that can replicate the valuable aspects of co-located group iteration, brainstorming and critiquing. However, a large portion of the challenges can be mitigated through leadership that utilizes what current science and research are finding in regard to motivating individuals.

Creative workers of the twenty-first century are in need of a better experience, one that removes the traditional constraints of management and unleashes them to do their best work. The science shows that the human condition is not apathetic and compliant, but rather that we as humans are designed to be passionate and engaged with our work and life. Offering bigger and better financial incentives engenders the opposite effect, by narrowing focus and fixating people on the end goal, stripping them of successful iteration and their creative conceptual abilities that are fundamental to doing innovative work. The right people will thrive in any environment, co-located or virtual, that affords them the opportunity to be autonomous, to seek mastery, and to contribute to a cause greater than themselves.

Free from managerial constraints, creative workers are better equipped to start building healthy, trusting relationships with their colleagues and co-workers. These connections built locally or virtually encourages the intense questioning, disagreement
and investigation of ideas and concepts are crucial to the creative process. These relationships will also assist in navigating challenges that inevitably arise in any work environment, particularly virtual teams. Creating an environment that has room for personal vulnerability will improve creative output by allowing team members the space to fail and make mistakes, which is the birthplace of creative innovative ideas. Without strong personal ties, no technology can save deficient relationships and the mediocre work they produce.

As both large companies and small businesses trend towards leaner organizational structures, their ability to collaborate with their creative teams remotely increases the value they offer to their clients. Workers collaborating and producing at high-levels in fragmented teams help companies and small businesses react more nimbly and offer more comprehensive services to their client-base without increasing overhead costs.

Inherently there can be a lack of humanity in working with a geographically dispersed team. However if leaders understand that traditional management approaches must evolve to support the intrinsic motivation of workers, then it becomes possible to purposely humanize the virtual experience producing higher quality work, and happier healthier workers.
APPENDICES
Appendix A:

Interview Questions
Appendix A:

Interview Questions

1. Describe a typical day at work.
2. Describe your use of digital communication during the work day.
3. How has this changed for you in the last five years?
4. How do digital communication technologies impact your creative process?
5. Describe the process your firm or agency uses to work through a creative problem.
6. Describe how your firm collaborates remotely/virtually with individuals or on projects.
7. What sort of preparations did you make before testing out remote/virtual working arrangements?
8. What do you see as the benefits of collaborating in this way?
9. What do you see as the challenges of collaborating in this way?
10. How do the communication technologies help the collaboration?
11. How do the communication technologies hinder the collaboration?
12. What unexpected issues have arisen from people and teams working remotely?
13. How is a creative culture maintained at this agency?
14. What negatively impacts your experience at work? Where are you dissatisfied?
15. What do you look for in any potential hire regardless of position in the company?
16. What qualities eliminate a person’s chances of being hired?
17. How do digital communication technologies change the way you are involved with sales?
18. Describe the critique process and how it works (or does not work) when collaborating remotely.
Appendix B:

Case Study: Echo International
Appendix B:

Case Study: Echo International

Work, the author’s company, partnered with OpenArc, a software and web development firm, in 2012 to design and develop a new web presence for Echo International, an international translation company based in Pittsburgh, Pennsylvania. As Work, is located in Ohio this required the two companies to undertake this project as a virtual-work experiment.

The project kicked-off internal with a simple discussion over the phone about the client and an exchange of both informative documents as well as financial agreements via email. The first meeting with the client to introduce the team was held in person in Pittsburgh. This experience helped to ground the project and provide all parties involved with some face-to-face interaction such that they could get to know each other.

With the initial meeting proceeding as a success, the design team returned to Ohio and fleshed out a strategy document (fig. 6) based upon the discussions that occurred in the kick-off meeting. This document was then exchanged over the course of two weeks back and forth between Work and OpenArc with an open discussion on refining ideas and wording. Once the document was finalized, it was sent along to the client for review. A week later the client initiated a conference call and the design team made use of GoToMeeting, a web conferencing tool, to review the document in a way such that all members could easily see what was being discussed. Following the meeting, changes were made to the final strategy document and the client made their approval, allowing the design team to move into the site mapping phase of the project.

Over the course of 3 days, the design team reviewed the current web presence
of Echo International and, using the strategy document as a guide, created and refined a new approach to mapping out the new web site for Echo International. This document also was exchanged electronically via email between Work and OpenArc multiple times for revisions before being released to and approved by the client.

During the course of one week, the design team at Work created three visual concepts to present to the client based upon the approved strategy. The design team had a Skype meeting with OpenArc to discuss progress on the concepts and discuss feedback before making some revisions and engaging the client in the first concept meeting. Another week went by and Work, OpenArc, and Echo International convened for another in-person meeting to discuss the visual concepts. The client selected one of the concepts (fig. 7) which then went into a detailed design phase where the design team created visuals of all components of the website. Upon approval of the detail design phase, the design team at Work created a multi-page PDF covering guidelines for the development team. Again a Skype meeting was held between Work and the developers at OpenArc to ensure clarity of the document before moving forward.

OpenArc initiated the coding and development of the site based upon the parameters outlined in the design guide. Once a rough cut of the development was ready, it was released to the design team for review. The design team made some further recommendations based upon the beta version of the site.

Currently the site is due for final deployment in May of 2013.
This brief is a summary of all of the strategic components relevant to this project. Defining parameters for concepts, methods, and directions in a single document serves both our team and yours in acknowledging responsibilities, efforts, and accomplishments on the path toward realization of our shared goals.

**DISTINCTIONS**

- Demonstrate the ability to span a global community
- Provide a multilingual, culturally savvy platform
- Emphasis on cross-cultural perspectives
- Proven, comprehensive methodology and ideology
- Cutting edge technological innovation
  - Telelingua
  - Sajan
  - L1ONBRIDGE
- Breadth and scalability of services offered

**ARCHITECTURE**

Architectures can drive market success and leverage existing technologies, resulting in more efficient and effective solutions. This is achieved by using a combination of proprietary and off-the-shelf tools to support complex processes. When building a site, it is crucial to keep the user in mind and design for success.
Recommended Site Map (F)
Echo International

Home Page
- Compelling introduction, featured content, highlighted news, upcoming events, international content, and demonstrative technical savvy.

About Us
- History
- Press
- Culture
- Technology
- Testimonials

Services
- Connect visitor with an Echo Team Member, explain application Echo's methodology within their services.

- Case Studies, information about the Echo Process and why it's successful.

- Thought Leadership
- Connect with an Echo Int'l Team Member
- Software Localization
- Connect with an Echo Int'l Team Member
- Interpretation Services
- Connect with an Echo Int'l Team Member
- Intercultural Services
- Connect with an Echo Int'l Team Member

Solutions
- Includes case studies, information about the Echo Process and why it's successful, and a section on thought leadership.

- Case Studies
- Sort by: Client, Industry, and Capabilities

News + Events
- Jobs
- Calendar
- Press
FIG. 8: ECHO INTERNATIONAL WEB CONCEPT
References


