Master’s Thesis
Exploring the motivational potency of Gamification

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Abstract

This thesis is an exploratory study of the subject of gamification (“the use of game elements in a non-game context”), a new proposed way of eliciting engagement in employees and consumers.

The gamification industry has been under immense growth since its inception in 2010 but the efficacy and effects of such initiatives are still under debate. While there are several potential avenues for gamification implementation – this thesis is positioned within an organizational context and its effect on employee motivation. Because of the novelty of the subject, little theoretical underpinning has been established and as such, the research question that has guided the work is “Does motivational theory render gamification relevant?”

The research question chosen is also contrasted against a larger problem statement that both includes controversy behind the claims of motivational potency of gamification initiatives: global technology advisory firm Gartner predicted in 2012 that 80% of gamification initiatives would have failed reaching their objectives by 2015.

Because of the novelty of the subject, an abductive approach has been deployed to complement the initial exploratory requirements of the subject and to determine the viability of potential future hypotheses. Using the social constructionist theory of framing this thesis contrasts independent game elements derived from Werbach & Hunter’s gamification framework with the universal needs for autonomy, competence and relatedness as posited by self-determination theory.

The main findings of this thesis are that while there seem to be certain motivational relevance for the use of game elements to elicit engagement, there also exist several previously unaddressed caveats. Above all, there is a heavy leniency towards competence facilitating game elements in current gamification discourse, and additionally, autonomy supportive game elements are independently non-existent. These caveats, and several others, are offered as potential explanations for why the predictions of failure rates have emerged, and are commented on as potential avenues for future research.
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1. Introduction

*This chapter provides the reader with a basic understanding of the research subject in a larger context. It also presents its' present-day relevance and the basic underlying assumptions that has created the industry of gamification. Lastly, this chapter will explain chosen research question within the context of a larger problem statement.*

1.1. Background

Our options for entertainment are evolving – whereas leisure time was once a time for solitary reading or TV watching, video games are increasingly becoming the preferred recreational activity for entertainment among youth today. The allure of video games is complex but their growing popularity is undeniable. Gartner reports that the worldwide video game market will be valued at $93 billion in 2013, an increase of 18,3% from 2012 (van der Muelen & Rivera, 2013) and that as many as 58% of Americans regularly play video games. The most anticipated video games now rival the biggest blockbuster movies in terms of revenue. As an entertainment form, the levels of engagement in video games are unprecedented with millions of people playing the equivalent of the time of a part-time job. In USA, over 5 million people report spending more than 45 hours a week on average playing video games. (McGonical, 2011)

As with any novelty, the debate on the effects of video games are raging on with concerns on the long-term impact on youth with their increasing inclination to favour fantasy worlds over real life. Historically, a large part of research done on video games has been focused on how it affects people and most notably how it influences children’s propensity for violence. However, as cultural acceptance and popularity of video games among the general public have grown, so has the attention from both academic scholars and corporate managers: there is strong business rationale in increasing worker engagement. A recent Gallup report on the American workplace shows reason for further interest in the source of video game allure: 70% of workers are either “not engaged” or “actively disengaged”, costing American businesses between $450 and $550 billion per year in lost productivity. The loss of productivity is not the only downside of a disengaged workforce, with negative consequences such as safety incidents, quality reduction and absenteeism included. (O’Boyle & Harter,
Is it possible to leverage the mechanics of video games in business, or other aspects of society? The answer: Quite possibly, it is.

The study of video games as a tool for behavioural change or engagement enhancer has been dubbed gamification and was one of the top technology trends in 2012 according to Deloitte (Palmer & Patton, 2012). It is predicted that at least 70% of the Global 2000 will have at least one application leveraging gamification by 2014 and that it will become an organizational necessity in the future. (van der Muelen & Pettey, 2011)

While there are many definitions of gamification, the most common one describes it as “the use of game design elements in a non-game context” (Deterding & Dixon, 2011, p. 9). Initial initiatives have mostly been directed to customers in attempts of increasing user engagement with products or services. Implementations vary from applying common video game elements such as progress bars for customers to self-track how much they have completed in a process, to Points and Badges for participation or Leaderboards for rankings. Some of these elements such as Points and Levels are not unfamiliar to the general consumer. Points have been used for a long time in loyalty programs such as frequent flier miles or levels in segregating credit card users. However, it is not until very recently these ways of engagement has been fully conceptualized and formulated into a whole industry.

The basic rationale behind gamification is that these game elements hold inherent motivational value for the user. For instance, by adding a Leaderboard (a visualization of internal rankings) to a sales team – it is hypothesized employees will see work as a fun, competitive game to play. As an extension, it is not only the hypothesis of motivational potency but also the changing demographic of the workforce that predicts a bright future for gamification. Deloitte calls this new generation of workers “Digital Natives”; people who have grown up immersed with technology, which will have significantly changed the cognitive processing, going from singular focus reading to multitasking in a digital sphere. Gamification will be an important component in interacting with Digital Natives in their “native language” (Parker & Patton, 2012; Morris & Venkatesh, 2000).

However, as the intrinsicalities and boundaries for gamification are continuously being explored, new facts are uncovered. Critics say that gamifying a process does not necessarily mean higher engagement (Hamari & Sarsa, 2014) and might even have unintended consequences (Werbach & Hunter, 2012). It has also been called the trivializing “pointsification” (Robertson, 2010), “exploitationware” for its
hypothesized addictive nature (Bogost, 2011) and it has been disregarded as just a gimmick (Perryer, Scott-Ladd, & Leighton, 2012). In 2011, Gartner predicted that 80% of gamification initiatives will have failed in reaching intended objectives by 2015 (Petey & van der Muelen, 2012) and two years later it was deemed by Fortune to be “essentially over” as a movement (Clancy, 2014). In May 2012, Pew Research Center and Elon University surveyed 1000 Internet experts on their thoughts on the future of gamification. Their opinions differed: 53% believed gamification would become widely used with some limitations while 42% stated a disbelief in the future for gamification on a broader scale, with 5% non-respondents. (Anderson & Rainie, 2012)

This apparent divide between scholars and consultants alike poses many interesting questions on the emerging industry – most notably, is gamification as a concept valid at all?

1.2. Problem statement

Painted as the end-all solution for the problems of organizational engagement, gamification holds promises to revolutionize business management all over the world with early industry numbers showing astonishing results on employee engagement levels. However, very little research has been done substantiating these grand claims of potency against empirically proven motivational theory. The gamification industry is still very new and the line between what constitutes facts, opinions and predictions are easily blurred. This makes the area both interesting and problematic to write about.

There is currently a severe lack of academic unity on basic definitions and frameworks, which makes conclusions on research highly scattered. Seaborn & Fels (2015, p. 27) writes that the unexplored middle ground between theory and practice is one of the largest impediments to growth of gamification as an industry: “theory is empirically unexamined and applied work lacks reference to theory. While some empirical testing has shown that gamification initiatives may have a positive impact on engagement, these reports are often anecdotal, come from gamification providers themselves and/or show severe methodological limitations (Hamari & Sarsa, 2014). The issue of lacking theoretical underpinning is something that Gartner repeats; the understanding of gamification principles are in general too shallow as organizations “are simply counting points, slapping meaningless badges on activities and creating gamified applications that are simply not engaging for the target audience.” (Petey & van der Muelen, 2012)
Brian Burke at Gartner comments that the biggest challenge in implementing gamification is to identify credible sources on game design and then subsequently, how to apply this knowledge in order to foster engagement in a business environment. Burke says, “Poor game design is one of the key failings of many gamified applications today.” He continues to comment more specifically: “The focus is on the obvious game mechanics, such as points, badges and leader boards, rather than the more subtle and more important game design elements, such as balancing competition and collaboration, or defining a meaningful game economy”. (Pettey & van der Muelen, 2012)

Interesting to note is how Burke himself writes of the salient industry problems of identifying credible design sources yet himself offers advice on what are more important game elements, without offering any theory to support his statement: this is a prevalent scene in the gamification industry at the moment. A lot of the currently prevailing industry knowledge and best practices on gamification derive from gamification consultancies or software providers. These sources might show positive results but they very seldom present their chosen methodology. At the time of writing, there are no longitudinal or comparative studies done on gamification which leaves unanswered questions as to whether the claimed effects of gamification on engagement are sustainable, which I would consider, from a corporate perspective, to be a basic requirement for investing in organizational improvements for competitive advantage. (Seaborn & Fels, 2015)

1.3. Research Question

I am in this thesis going to address one of the major gaps in current gamification discourse: the lack of theoretical underpinning. As gamification is based on the foundational belief that game-design elements can steer human behaviour, most prevalingly described as “increased engagement”, the theoretical underpinning I am going to compare its current discourse against is motivational theory. What I am attempting to do is to theoretically test the subject against its’ own basic assumption by answering:

• **Does motivational theory render gamification relevant?**

More specifically, I will answer this question by applying and contrasting Ryan & Deci’s (2000) Self-determination (SDT) theory to individual game elements retrieved from Werbach & Hunter’s (2012) gamification framework. By answering this question
I hope to narrow the gap between gamification theory and practice while adding to the foundation for how to approach future empirical studies and furthermore, to hopefully deliver insight into current state of the industry. Although outside the scope of the research question, I hope to add substance to the discussion on why many of today’s gamification initiatives are failing, as a comment to the general problem statement that prompted my research question.

1.4. Structure

The objective of structure is to guide the reader along the author’s line of thought. I will in this subchapter shortly give, as a complement to the table of contents, a presentation of the structure of my thesis. It is divided into six overarching chapters:

1. Introduction
2. Methodology
3. Theory
4. Analysis
5. Conclusion
6. Perspective

The introduction connects the reader to the contemporary and prevailing problem of workplace disengagement and how consultants and scholars have begun to look to the rapidly growing industry of video games as a potential solution to these problems. It presents the general problem statement of predicted failure rates and disagreements on motivational potency associated with gamification. Lastly, it positions the need of my choice of research question from a scholarly perspective.

The second chapter, Methodology, will familiarize the reader with the theory of knowledge that I will adhere to in my analysis. Furthermore, it presents a delimitation of my research subject and my reasons for these choices. Lastly, the second chapter presents and explains my choice of scientific method.

The third chapter, Theory, is divided into two sections. The first one is of motivational theory and the second one of gamification. I will deal with these two sections in sequence by offering brief background on the subjects, present their basic assumptions and present my choice of theoretical frameworks.
In the fourth chapter, Analysis, the two chosen theoretical frameworks will be compared to see if any overlap between motivational theory and gamification can be found. My Analysis will lead to the fifth chapter, Conclusion, which will present the reader with the conclusive answer to my research question.

Finally, I will in the sixth chapter, Perspectives, offer my thoughts on the implications of my findings for the corporate workplace, specifically addressing the general problem statement of predicted failure rates. I hope to be able to offer some general advice on corporate implementation and suggestions on future scholarly research.
2. Methodology

This chapter provides the reader with an understanding of the perspective that I view gamification through and the scientific method that I have used in order to reach the conclusions presented in chapter 5. It starts of with a presentation of social constructionist theory and the concept of framing (Callon, 1998; Goffman, 1974). Subsequently I present a delimitation of my thesis subject and the rationale behind my choices. Lastly, I present my research methodology and my critique of it.

2.2. Research method

The objective of this thesis is to ascertain the relevance of gamification as a concept for eliciting engagement. Because of a current lack of theoretical underpinning in current subject discourse subject I have chosen to employ an exploratory research methodology. Using an abductive approach, the objective is to determine which future hypotheses are viable to test, not which ones to assert, as would be the case with the deductive approach (Ho, 1994). Bhattacherjee (2012, p. 6) writes of the exploratory research methodology as specifically fitting for “new areas of inquiry, where the goals of the research are: (1) to scope out the magnitude or extent of a particular phenomenon, problem, or behavior, (2) to generate some initial ideas (or “hunches”) about that phenomenon, or (3) to test the feasibility of undertaking a more extensive study regarding that phenomenon.”

It should be noted that exploratory research in general is not able to offer as definite answers to research as other kinds of methodologies such as descriptive or explanatory. However, because of the novelty (Hamari & Sarsa, 2014; Seaborn & Fels, 2015) of the subject and guided by conclusions on the lack of theoretical underpinning drawn by earlier researchers I argue that an exploratory approach is most suitable for the subject. Stebbins (2001, p. 8) writes of the exploratory research as a necessary precursor for any new research field: “To understand well any phenomenon, it is necessary to start by looking at it in broad, nonspecialized terms. In other words, first observe the woods, then study its individual trees.”

With regards to the necessity of first establishing a theoretical underpinning for the subject, the analysis relies on secondary research data in various forms, most notably peer-reviewed journal articles and papers and published books. Because of the novelty of gamification, Internet sources, Google searches, blog posts and industry reports have complemented information covering gamification. There is no
claim of being able to judge the feasibility a billion dollar industry within the context of a Master's thesis, anecdotal evidence and industry reports might suggest other; rather, the aim is to bring more theoretical clarity to the validity of industry claims. Utmost, I hope that my findings might raise further questions to and to guide future research on the topic. Research that will be increasingly important as the industry continues to grow.

There are some limitations of relying solely on secondary data resources, but these valued against the feasibility of attaining the overall objective of the research – to assist in establishing a theoretical underpinning of the subject. Observer bias and errors of subjectivity may also occur due to the way the data is interpreted. Although, such errors have been reduced by continuously inquiring the newest and most valid data from updated sources and comparing it throughout the entire research process.

The main limitations of specifically the choice of research on motivational theory, is that there is a risk that the original data collection does not entirely match the purpose of this thesis. However, as motivational theory claims to be universally applicable to all people, the risk of mismatch in this matter is diminished. More so because of the theoretical extent of the research subject, primary data collection would be hard to construct and test because of limitations of the time scope of the thesis. Additionally the choice of not using a case study to empirically test studies was made with reference to inaccessibility of companies that had failed with gamification initiatives. Furthermore, finding a case company that had used the culprit of Werbach & Hunter’s (2012) framework was deemed to be slim, why this research more so attempts to offer what Stebbins (2001) calls an observation of the woods – and for the individual trees to be committed to in future research.

Additionally, as gamification is such a new concept, the general foundation for the research area need to be better defined before it is sensible to commit resources into empirically tests. The empirical evidence existing today is mostly anecdotal or produced by sources with a vested interested in the industry.

2.1. Theory of knowledge

The theory of knowledge, epistemology, denotes the goal-orientation of an interpretation of reality. Presenting my theory of knowledge, the point of view I have when writing about gamification, is important for the reader to understand as my analysis will be affected by the lens that I process knowledge through. An
understanding of the theory of knowledge I adhere to becomes even more important, as my particular research question investigates a general theoretical underpinning of the gamification subject.

The theory of knowledge I subscribe to in this thesis is social constructionism. Social constructionism, or the social construction of reality, assumes that reality is the product of an ongoing process of creation between human interactions and between humans and their surroundings. Social constructionism views society as consisting of both a subjective and an objective reality (Andrews, 2012) or as the actor Robert Evans famously said it: “there are three sides to every story – yours, mine and the truth.” Social constructionists posit that concepts are created, not discovered, by the mind. Berger & Luckmann (1991) writes of the process of knowledge creation as the institution of subjective realities that over time are habitualized and routinized into objective truths.

2.1.1. Framing and overflows

When analysing gamification from a motivational perspective, I will specifically refer to Callon’s (1998) essay on Goffman’s (1974) sub theory of social constructionism: the theory of framing. Callon (1998) argues that all social interactions are imposed by what he calls frames. These frames are often invisible and take the form of socially conditioned, subconscious cues. They dictate social interactions, how we behave and how we react.

For instance, there are no formal rules dictating how to present oneself in a job interview, however, most people know what are expected of them when entering such a setting. All human interactions are influenced by culturally learned tacit agreements: when we meet someone for the first time, there is a presupposed understanding to shake hands to introduce yourself. Other frames are determined by physical cues: when we enter a church, we know that we are expected to talk with a quite tone. However, frames are pervasive and can be found in all areas of life that include human interactions. Specifically, Callon (1998) discusses the use of technology in managing externalities and in conclusion that these externalities are constantly emerging and re-emerging, and that substantial investments need to be made in order to consolidate them. As an example of this, Callon (1998, p. 249) writes that: “The frame establishes a boundary within which interactions - the significance and content of which are self-evident to the protagonists - take place more or less independently of their surrounding context.” Anything that escapes this
boundary, Callon (1998) calls overflows. All human interactions are influenced by tacit agreements that are most often culturally learned. The framing process is dual in nature, where these protagonists bring cognitive resources that are shaped by their previous experiences and only truly apparent to themselves. While framing puts the outside world into a clearly defined context, it does not remove all links to it – reality is always present and will influence the framing to various degrees. The extent of how much influence the outside world has on a frame can be bracketed into two different diametrically opposed attitudes on the subject. (Callon, 1998)

The first one assumes that framing is the norm and overflows are leaks. This attitude forms the basis of what in real life can be best exemplified with contracts negotiations. From a perspective of framing, the role of the contract is to clearly define the expectations of interaction between two independent parties. The purpose of the contract is to define an agreement so rigid that there are no variables or scenarios that are not thought of. In essence, the contract should have stipulations for every conceivable situation that could possibly affect the nature of the agreement. However, reality will always be present, and all the contingencies in the world cannot be accounted for when writing a contract (even if it was possible to outline all conceivable scenarios, it would surely be too costly to reach the point where they have all been outlined) Regardless, this attitude supposes that it is indeed possible to frame necessary elements and that any contractual contingencies, or overflows as Callon calls them, will be seen as preventable “leaks” of the frame. (Callon, 1998)

The other approach to framing considers frames as an exception rather than as rule. Frames are seen to be very costly to implement and to be always being imperfect. Using the example of the church: without the church walls, years of studying for priests and clerks and the habitual mindset of the churchgoers – the framing of a church ceremony would be impossible. So instead of considering frames as the norm, this second approach considers overflows as the norm that can only partially be contained with substantial investments. In essence, the frame is always bound to leak and it is impossible to perfectly contain interactions or behaviours. Furthermore, the futility of attempting to create the perfect frame goes beyond the extensive work of creating the frame and into the nature of human psychology. Granovetter (1985) posits that a person’s interests, intentions, objectives and projects are for people not intellectually accessible as a to them consciously changeable matter in as much as it is not either the product of cultural values, norms and institutions. They are all interdependent and under continuous reconfiguration.
Building on the changeable nature of human experience, Callon (1998) argues that the act of framing translates to a constant effort to push participants onto a demarcated stage created with careful specifications. The people affected by the frame cannot ever be wholly disengaged from the outside world, no matter how strong the frame is. Attempts of framing the overflows that are bound to occur in the ongoing, pervading connection between the agent and the outside world will lead to new overflows in an infinite loop. The only thing that can be done is to attempt to minimize, and as best as possible try to predict overflows and how to deal with those. (Figure 1)

![Figure 1. Relationship between frame, overflows and connected costs](image)

In the workplace, a most basic example of framing is the one of a contractual agreement between two parties and for the purpose of this thesis; the most interesting one is between the employer and the employee. In general terms, the contract portrays the term of value exchange between the employer and employee. It specifies in detail what expectations are put on the employee in terms of work tasks and goal accomplishments. On the other hand, it specifies what, from the perspective of the employee, an expectancy of remuneration would look like – including softer attributions such as benefits and freedom to choose work methods. The end goal of the contract is to in an unambiguous way as possible delineate expectations for the upcoming work relationship. Any deviations from this constructed frame that the expectations form are what Callon (1998) calls overflows.
While the physical contract is not more of a frame than the piece of paper it is written on, the actual text introduces a series of both tangible and intangible elements that help construct the frame. However herein argues Callon lies the crux of the argument: each of these elements also acts as a “potential conduit for overflow”: the employee will go to the restroom, make coffee, chat with co-workers and do a myriad of other tasks that are not agreed upon within the frame of the contract. (1998: 254) As overflows will happen regardless if one uses the first or second view of framing, employee management becomes in its essence about ensuring that overflows from the contractual frame are positive for the company’s value creation. Herein, writes Callon (1998, p. 255), lies an interesting paradox: “a totally successful frame would condemn the contract to the sterile reiteration of existing knowledge.” While a flawless frame might be considered advantageous in certain situations such as industrial production (besides, a wholly hermetic frame is by its definition contradictory), I do not consider it to be in most modern corporate settings where companies prosper on continuous improvement.

A most substantial cost of managing overflows lies in the identification of them. I would argue that anything worth framing is worth measuring and thus, the extent of the overflows will be an important part of measuring the strength of the frame. This activity has been increasingly easy to implement in with technological advances. IT-based monitoring systems can track what employees spend their time doing on their computers, easily identifying data and any contractual contingencies such as the use of social media, private e-mail, and general Internet procrastination.

What is interesting to take final note of is that these monitoring systems however, as much as they are attempts to further strengthen the frame of the relationship initially established between employee and employer through the contract – will create further potential conduits of overflow in a perpetual cycle, according to Callon (1998).

2.2. Delimitations

As the subject of gamification to this day is very theoretically unexplored, a lot of effort needs to be put into delimiting the scope of research. In general, delimitation is necessary in order to ensure novel findings but is of even greater importance in the specific case of researching gamification, as the subject in its entirety is novel.

Following delimitations are guided by Ryan et al’s (2006, p. 349) position on researching motivation in games: “a true theory of motivation should not focus on
behavioral classification constrained by the structure of a particular game, but instead address the factors associated with enjoyment and persistence across players and genres, and how games that differ in controllability, structure, and content might appeal to basic human motivational propensities and psychological needs."

First of all, there is a primary division of gamification applications into a consumer and an enterprise segment. Since I am approaching gamification from a top-down approach (gamification as a frame), differentiation between these two types of gamification initiatives should not be of true relevance for answering my research question or in addressing my problem statement in general. However, when applying real life perspective in order to visualize concepts or make clarifications I will consistently use examples addressing enterprise gamification. I make this choice solely on the basis of my Master's concentration (Strategy, Organization and Leadership), which is more concerned with organizational than business-to-consumer issues. Exemplifying through consumer gamification would be more suitable in the context of a marketing concentration.

Secondly, enterprise gamification can be and have in practice been further divided into many different segments, solutions, and organizational applications such as sales, customer service, product development, HR and marketing. An important assumption in motivational theory, that I will also adhere to, is that people share the same basic needs (R M Ryan & Deci, 2000) and it is therefore of no specific motivational consequence what organizational function gamification aims to enhance. Social constructionist theory would argue that, as reality is a social construct, enacted on by years of programming, there will be differences in how various groups of people interpret different kinds of frames. However, as gamification has not yet been conceptually explored, the granularity of the effect of motivational affordances on different groups of people must remain outside the scope of this thesis, however these assumptions would be interesting to empirically test in future research.

As such, for the purpose of my thesis, the theoretical result of pairing motivational theory with gamification should be no different regardless of what context it is put in. Either the application of game elements is relevant from a motivational perspective, or it is not.

Third and last, with the same reason I do not concern myself with certain organizational functions, I take no account of demographic differences such as age,
gender or ethnicity or social factors such as education, accommodation or other lifestyle differences. It is implicitly suggested by Parker & Patton (2012) and explicitly stated by Morris & Venkatesh (2000) that some general demographic factors point toward a higher success rate for gamification initiatives among young people than old people and these suggestions do make sense from a social constructionist perspective. However, before these more specific categories and limitations are further explored – the first step will be to establish whether gamification is theoretically relevant from a motivational perspective.
3. Literature review

The literature review will first present an introduction on motivational theory, covering Maslow’s theory on the hierarchy of needs to give the reader a brief understanding of human motivation. Second, I will outline Self-determination theory and its three core pillars: autonomy, competence and relatedness and clarify the difference between extrinsic and intrinsic motivation. Third, and last, I will present gamification as a concept, and the extent that it has been theorized on up until today.

3.1. Motivation

Definition from the Oxford Dictionary:
1 A reason or reasons for acting or behaving in a particular way:
1.1 [MASS NOUN] Desire or willingness to do something; enthusiasm:

The study of human motivation has always been of interest to psychologists and more recently, also to researchers interested in enhancing the productivity of the workplace. What are the factors that make humans tick? Why do we even get out of bed in the morning? In the end, this is what motivation is about – deciphering the reasons for why we act the way we do and for the scope of this thesis, more specifically, how it can be influenced.

The most basic understanding of motivation is as a will to fulfil a need thus, the stronger the need, the stronger the motivation. In the workplace, motivation is most restrained by the goals of the organization, and might not be congruent with the innate desires of the members of the workforce. Baard et al (2004, p. 2045) writes that the concept of needs are a “substantial heuristic utility for delineating dimensions of the environment that would be expected, a priori, to lead a positive versus negative work-related outcomes.”

Another big reason for the large interest in motivation research is because of the subject’s foremost quality: it produces results. Any undertaking we do will produce a greater value when a high motivation to get the work done is present. A runner with a strong reason or overwhelming desire to reach a destination will always trump an indifferent one, given that all else is equal. If one does not possess the desire of changing to healthy eating habits, there is no reason to go through the cognitively burdensome activity of breaking the habit. This is true in all facets of life, both personal and professional. Numerous researches have confirmed that there is a congruency between high workforce motivation and workplace productivity. This
means that when workers’ motivational levels are high; their desire or willingness to
work toward organizational goals is high. (E. Deci et al., 2001; Stone, Deci, & Ryan,
2008)

One of the most famous characterizations of human needs is Maslow’s hierarchy of
needs (figure 2) (1943) from his paper “A Theory on Human Motivation”. Maslow
posits that human needs are ranked in a very specific order, with the most important
first: physiological, safety, love and belonging, esteem and lastly self-actualization.
The needs are ranked in the order of a pyramid, where in order for higher ones to be
fulfilled, lower ones need to be complete first.

As society has progressed throughout history, more and more of our most basic
needs are being met. Most people in Western society today can at least partly fulfil
the three most basic needs of physiological, safety and belonging. As these motives
are fulfilled, people move on to the pursuit of increasing self-esteem and self-
actualization. The drives are interlinked, no higher drive can be truly pursued until a
lower one has been satisfied: the pursuit of achievement is redundant if the person
has no food. However, when the need for food has been satisfied, other ‘higher’
needs emerge until we reach the highest need of self-actualization. Maslow posits
that “...a want that is satisfied is no longer a want. The organism [the person] is
dominated and its behavior organized only by unsatisfied needs. If hunger is
satisfied, it becomes unimportant in the current dynamics of the individual.” (1943, p.
375) At the same time, motivated acts can simultaneously satisfy multiple needs. If
there is a great need for water within a tribe and a person finds a source; that person will meet both the physiological need, the need for love as his or her tribesmen give praise, and he or she gain increased recognition as a result of the efforts.

A non-engaged worker would, as an example, rather spend time doing something he or she feels truly passionate about, like a hobby, rather than doing corporate work. However, in order for the worker to satisfy the basic needs of water, shelter, warmth and food, he or she needs to work to earn his upkeep. Thus, the basic need for money trumps the need for self-actualization. What this leaves for the worker is then a fulfilled basic need but a continuously unfulfilled need for self-actualization. Of course, the pursuit of self-actualization can be done in spare time but sleep, commuting and household chores take up a lot of time in a day. How can then self-actualization be achieved and workers get engaged so productivity rises? In order to answer that, the concept of self-actualization needs to be examined further in detail.

In most Western cultures today, the lowers levels of the pyramid have been to a large extent been fulfilled in a majority of people. The general European or American citizen has access to food, water and shelter as well as security, stability and freedom from fear. (N.a., 2013) According to Maslow’s theory of the hierarchy of needs, increasingly so, the need for self-actualization in Western society is the need which is most apparently lacking. Unfortunately, while Maslow’s theory was both pioneering and functional as an intuitively solid approach to understanding human motivation it has largely remained empirically untested, and Maslow himself even said: “It isn’t normal to know what we want. It is a rare and difficult psychological achievement.” (Gagné & Forest, 2008; McGonical, 2011, p. 114) However, as research on human motivation has progressed – so has the understanding of what drivers connect to facilitating self-actualization with one of the most prominent and empirically validated approaches are called Self-determination theory.

3.2. Self-determination theory

Self-determination theory is a macrotheory of motivation first introduced by Ryan & Deci in the 1970s and has since its inception been elaborated by scholars from all around the world. It addresses issues such as development, self-regulation, social environment’s impact on motivation and well-being. While SDT was created in the 1970s and had taken a more comprehensive approach in the 1980s it did not truly start to gain widespread attention and recognition until in the last decade. (Deci & Ryan, 2008) Ryan & Deci writes of SDT theory as an understanding of how humans
facilitate “optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being.” (2000, p. 68)

Whereas historically many other theories on motivation were occupied with treating motivation as a unitary measurement of an amount of motivation people felt for a certain task (Skinner, 1953), SDT theory identified different distinctions of motivation and that these different types of motivations were of varying quality. Amongst many other theories of motivation, the idea is that human needs are learned and there are distinct, socially constructed, individual differences. SDT theory is based on the contrary, that there are three basic, biologically inherent and universal needs: competence, autonomy and relatedness. The universality of these three needs have been tested in in a large variety of different contexts such as education, goal orientation, health, sports, psychology and workplace and has been proved to be relevant independent of culture or other demographic factors. (Deci & Ryan, 2008)

According to SDT theory, people act upon two different types of motivation: intrinsic or extrinsic. These two different types, or orientations, does not concern the extent of the motivation but rather the underlying attitudes of it (Ryan & Deci, 2000).

Extrinsic motivations are acts influenced by external factors such as rewards or punishments. The reason for action is the desire to, for instance, receive a salary or escape punishment. This type of motivation can be seen to influence us increasingly much as we grow up and become aware of societal realities and can also be compared to the lower levels of Maslow’s (1943) pyramid where food, shelter and security are externalities very important for ensuring survival.

The other type of motivation, the intrinsic, is the one that is driven by our innate desires. More specifically, these are the things we would do without the promise of any external rewards or punishments; we do it for the act itself. These are activities we would love to do stranded on a deserted island, without recognition or any other positive externalities. It is an inherent human tendency to search for growth, challenges and novelty and this growth can be both thwarted by external factors, but also supported by them. As everything in life cannot be intrinsically motivating to everyone, understanding how to handle, foster and create frames that elicit external motivation is a powerful tool in itself. What should be noted when comparing the different types of motivation is that it is impossible to maintain intrinsic motivation for all tasks that need to be done in order to be a functioning member of society. A great deal of actions undertaken during a normal day are extrinsically motivated: a majority
of people do not commute to work because they find inherent enjoyment in doing so – they are instead driven by externalities; in order to be able to buy food, we must work and getting to location is a crucial first step. As the value and rarity of employment increases, the inclination to undertake long commutes increases. (Ryan & Deci, 2000)

The three conditions of competence, autonomy and relatedness that need to be met in order for intrinsic motivation to be maximized and for people to flourish have also been hypothesized that the need satisfaction of these three needs can predict positive work-related outcomes. Approaching work, Deci (2004, p. 2047) writes: “/.../ that when job satisfaction results from attainment of basic need satisfaction, it would be associated with effective performance, but when job satisfaction results from attainment of desired outcomes that do not satisfy the basic needs, it would tend not to be related to effective performance.” I will discuss these three needs independently below.

3.2.1. Autonomy
The need for autonomy as an important part of intrinsic motivation started in research on the effects of environmental events. Early research on the effects of extrinsic rewards first suggested it to be merely a pale version of intrinsic rewards. Both Deci (1971) and Lepper, Greene & Nisbett (1973) found that extrinsic rewards could undermine intrinsic motivation. These findings also prompted research into the effects of threats (Deci & Cascio, 1972), deadlines (Amabile, DeJong, & Lepper, 1976), directives (Richard Koestner, Ryan, Bernieri, & Holt, 1984) resulting in a general conclusion that any type of expected external factors imposed on task performance undermines intrinsic motivation.

The need for autonomy can be described as experiencing choice and feeling as the initiator of one’s own actions, that the person experiences self-endorsement in their actions. The distinction between autonomous motivation and controlled motivation is one of the most central in SDT. Autonomous and controlled motivation can be divided into a spectrum of different levels of regulation, starting at external and ending at intrinsic.

The least autonomous, or most controlled, motivation is External regulation, which is the involvement with a task solely prompted by external contingencies. These contingencies act as controlling mechanisms encroaching on the autonomy of the person. A person engaging in a task because of a contingency of reward or punishment will see the view the reward as coercion, as being controlled, which will
hinder motivation facilitation. An example would be a child playing a sport that he or she dislikes solely for the purpose of attaining a reward from his or her parents. In an organizational context, an employee working in a “dead-end job” solely for the salary can succinctly characterize it. (Vansteenkiste, Lens, & Deci, 2006)

The second type of external motivation is Introjection, which people engage in, in order to comply with internal pressure. It can be seen as partially internalized although not accepted as fully their own and will therefore also come paired with feelings coercion and control. A person who chooses to take a job based on wishes or demands of his social circle would do that because of Introjected regulation. (Vansteenkiste et al., 2006)

The last type of non-intrinsic motivation is Identification, where the person has internally accepted the regulation of the activity as his or her own. The activity is identified as of personal relevance to a goal and will be undertaken more or less willingly, with the understanding that it is beneficial with relevance to an intrinsic motivation. An example would be an employee attending a conference because it is important for strengthening his or hers business network or learning an uninteresting skill of high importance to future career progression. (Vansteenkiste et al., 2006)

Although the typography of motivation is a continuum it does not necessarily mean that a person’s motivations will shift linearly along it. One can start engaging in an activity solely because of external regulation, i.e. the promise of reward, and rapidly internalize it into self-determinism. In general, the more autonomy supportive the environment, the better internalization of extrinsic motivations. Specifically commenting on the motivational pull of video games, Ryan et al (2006, p. 349) expects “autonomy to be enhanced by game designs that provide considerable flexibility over movement and strategies, choice over tasks and goals, and those where rewards are structured as to provide feedback rather than to control the player’s behaviour.” The level of autonomy relating to the reward is categorized according to the continuum presented below.
Practically, autonomy-support can be facilitated by acknowledging the employee perspectives, offering opportunities of choice and encouraging self-initiation (Baard et al., 2004). It has furthermore been associated with a number of positive benefits such as actively pursuing new information (R. Koestner & Losier, 2002), increased goal attainment (Sheldon & Elliot, 1998), and higher performance (Baard et al., 2004; Goldfard, Brackfield, & Amabile, 1990).

Gagné & Forest (2008) proposes that there are three important organizational levers that currently influence job satisfaction among employees. Those are: job design, interpersonal relations and compensation. Practically, leveraging these three levers include ensuring interesting and meaningful job tasks, managerial support, and a connection with the leader’s of the organization; transformational leadership. Conversing, many common organizational tools used for motivation today have been shown to establish controlled environments. These include contingent rewards, deadlines, surveillance and evaluation. (Gagné & Forest, 2008) The usual approach of organizational compensation systems are that employee’s should receive pay and benefits according to the level of value that they bring. The prevailing theory on compensation is agency theory (Jensen & Meckling, 1976), which suggests an inherent problem in the relationship between business owner (principal) and employee (agent). Agency theory assumes that there is an inherent misalignment between the goal’s of the employee and the goals of the organization. For instance, the goals of the employee might be to garner as many benefits as possible and work as little, and the owner’s main goal is to grow the business.
In order to counteract this relationship, compensation models are enlisted: the employee is paid in accordance to the extent that he or she has fulfilled the goal of the organization. From a self-determination perspective, bridging a misalignment of goals with, for instance, monetary compensation is seen as impeding the need for autonomy. If agency theory and SDT theory were both correct, compensation would translate to a control mechanism that infringes on employee’s need for self-regulation. Vansteenkiste et al writes of workplace rewards as control mechanisms that “leave people feeling like pawns to the rewards” (2006, p. 20)

3.2.2. Competence

A second criterion for intrinsic motivation is competence, which in broad terms is the capacity to interact effectively with one’s environment. Competence in dealing with our environment is a life long human feature which was first noticed in animals that engaged in, without the expectation of any external rewards, exploration of and learning about their surroundings. An example is Nissen who observed rats opting to take a route that crossed an electrified grid in order to reach novel areas. This drive to explore can also readily be seen in small children who grasp, taste and smell anything novel within their reach. There is a clear adaptive advantage with the need for competence: it ensures mastery over one’s environment and thus, ultimately, increased changes of survival. Additionally, effective action is elicited by an experiential satisfaction that requires renewed thresholds. Children many times engage in newly learned competences for the mere satisfaction of it, but do continuously change, or rather raise, the bar of challenge as old tasks become internalized. Observed is the fact that competency is derived from effective functioning with the environment, but only to the extent that one’s capacities are continuously being stretched and tested. (Deci & Ryan, 1985: White, 1959)

The threshold for the optimal level of challenge has been called flow, which is characterized as a state of autotelic enjoyment (Csikszentmihalyi, 1975). Activities that are far below one’s capabilities will inevitably lead to boredom while engaging in tasks stretches ones capabilities too far will interrupt the flow-state. White (1959) calls this preoccupation with changes in the stimulus field, and our desire to master them, effectance or the need for competence.

3.3.2.1. Cognitive Evaluation Theory

A sub theory of SDT is the Cognitive Evaluation Theory (CET) (Deci & Ryan, 1985) which posits that in order for feelings of competence to enhance intrinsic motivation, they need to be accompanied by a sense of autonomy. The reasoning behind CET is
that since competence is the product of a relationship between human and task, it can be affected by external factors such as feedback, rewards and communication. These factors are not the cause of the innate interest in partaking in a task but will inevitably according to research on autonomy-support either facilitate or undermine intrinsic motivation for it.

CET brings several examples of how such factors affect intrinsic motivation. For example, an accomplishment will not enhance intrinsic motivation unless there is what deCharms (1968) calls an internal perceived locus of causality. The locus of causality refers to the extent of which outcomes are results from forces outside or inside the person’s control. In contrast, the perceived locus of causality is the person’s belief about the extent of which outcomes are results of forces outside or inside his or her control.

The intentions of the sender of the task are inconsequential to whether the act is seen as controlling or informational by the receiver. If an instrumentality is introduced between task and outcome, engagement will be decreased, even if the instrumentality is framed as a positive experience such as “do this task and get the chance to win”. Even feedback, a commonly thought positive tool for increasing motivation, has been found to have the ability to negatively affect intrinsic motivation, if viewed as controlling by the recipient. (Deci & Ryan, 1985)

In essence, the effect of the instrumentality is subject to how it is framed by the sender. Framing of a task will always be necessary in order to distinguish objectives and to bring structure to how it is to be executed. Structure promotes goal orientation and guides people in attaining mastery; it inherently introduces expectations and instructions. The implementation of structure creates further implications based on the functional significance of the event, as perceived by the receiver. Structure can either be controlling or informational and whether the participant interprets it as one or the other has important implications for the motivational strength of the recipient. (Koestner et al., 1984)

In order for intrinsic motivation to be enhanced, there must be a clear connection between the person’s action and the subsequent outcome of the action. If it is unclear whether the outcome can be connected to the action, intrinsic motivation will be undermined, even though outcome feedback shows a positive result and thus also shows competence. In short, for a high level of intrinsic motivation, people must experience self-determination in their actions. Also important to take note of is that, while the need for competence is innate in all people, there are no tasks that are universally interesting to all people. In summary, the CET aspects of SDT suggests that competence and autonomy can support or impede intrinsic motivation but only in
subjects that hold intrinsic interest to the individual from start. Competence and autonomy cannot create intrinsic interest; only alter the levels of it. (Ryan & Deci, 2000, p. 59)

3.2.3. Relatedness
The third criterion for intrinsic motivation is relatedness. Baumeister & Leary first proposed the need for relatedness with departure in the belongingness hypothesis, which is that: “human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships.” The criteria for fulfilment are additionally that these interactions are pleasant and that they must take place in a context that is at least temporarily stable. Adding that the their proposed need for relatedness is “/.../ for frequent, non-aversive interactions within an ongoing relational bond”. (1995, p. 497)

This means that in order for relatedness to be satisfied, the person in question needs to believe that the he or she is liked, or loved, by his or her peers. If the opposite is believed, or if the person doubts the source of his perceived relational belonging, need satisfaction of relatedness will be thwarted. There is as such an important distinction in satisfying the need for relatedness and common affiliations: daily contacts with unsupportive and indifferent others will not satisfy the need for relatedness. At the same time, on the contrary: intimate, supportive and emotional contact with others cannot substitute low frequency in interactions. (Deci & Ryan, 1985)

Relatedness is a key cause for why people engage in certain behaviour. There are even situations where people engage in behaviour not intrinsically interesting because other people whom they value connection with, or who they would like to share a connection with, value them. For example, Ryan et al (1994) found relatedness to parents and teachers to be an important factor regarding the level of intrinsic motivation for schoolwork shown in children. In a work context this would mean that the quality of interpersonal relationships to colleagues and managers would be a very important factor in well-being, performance and job engagement.

There is also a component of satiation and substitution in the belongingness hypothesis. Satiation refers to the diminishing returns of additional relationships and substitution to the fact that relatedness is interchangeable. These implications are that there is an optimal amount of relatedness a person can feel, and that the loss of this need satisfaction can be replaced by new social connections. In an organizational setting, company culture is seen as very coherent with the need satisfaction of relatedness. Culture is the implied beliefs and behaviours of
organizations. It dictates social procedures, values and norms and can be a very powerful force in dictating how employees should think and behave.

Vansteenkiste et al (2006) concludes Relatedness to be a key part in fully internalizing regulations to according to the continuum of motivation (figure 3). The facilitation of the needs for competence and autonomy will help move regulation across the continuum of motivation but will not be completely intrinsic if it is not supported by family, group and/or social order that the person wants to belong to.

3.3. What is Gamification?

Horrification, blurbification, mollification, qualification, justification, unification, the examples of ifications are many. -Ifection means “the process of becoming” and thus, gamification would literally translate to “the process of becoming a game”. Is it as simple as that?

I will in this subchapter delineate the origins, definitions and building blocks of what today is referred to as gamification. I will start with a brief history of the concept, present current definitions and explain my rationale behind which one I will coherently use for basis of my analysis, and lastly present the gamification industry today.

In 2003, Nick Pelling wrote that his newfound and was-to-be short-lived consultancy aimed to help “manufacturers evolve their electronic devices into entertainment platforms” and he called this methodology gamification. Little did he know he had created a buzzword that 10 years later was on the verge of becoming a multibillion-dollar industry. (Werbach & Hunter, 2012) However, it was not until 2008 the concept started to gain widespread momentum. In the blog post “Gamification: Game Mechanics is the New Marketing”, James Currier wrote about how conventional marketing should be considered dead. Instead of influencing and convincing, Currier argued that marketers should instead aim to create contexts where it is in the self-interest of consumers to do what the marketers want. Currier argued that with the help of game mechanics such as “leader boards, leveling, currencies, stored value, privileges, super powers, status indicators, random rewards schedules etc.”, consumers themselves would be compelled to engage with the marketed service or product without any of the overtness of conventional marketing such as TV commercials or billboard advertisements. Currier’s reasoning was that people would
have an innate desire to engage with the products, in order to achieve these set rewards. (Currier, 2008) A variety of different industries and processes have attempted gamification in order to increase engagement with customers, employees and stakeholders. Examples are education, healthcare, sales, production and marketing. There is a general divide in current gamification discourse, splitting practice into three segments: consumer, enterprise and behavioural-change. Werbach & Hunter (2012) calls these two different ways of gamification internal and external gamification, where internal gamification aims to increase company productivity and internal gamification aims to strengthen current customer or prospective customer’s relation to your brand. Gamification for behavioural-change is mostly used by non-profit organizations in order to help changing habits for positive outcomes such as promoting less obesity among school children and promoting a conscious approach to personal finance. In the end, all three divisions of gamification aims to promote engagement with their respective targeted segment.

As gamification was created and subsequently formed by bloggers, consultants and marketing departments more so than in academia, the exact definition of the phenomenon is still under academic debate and as of yet there is not any universally accepted definition.

Examples of definitions of gamification are:

- “The use of game design elements in non-game contexts” (Deterding & Dixon, 2011, p. 9)
- “A process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation.” (Huotari & Hamari, 2012, p. 19)
- “Gamification is a collection of game-design-origin know-how that facilitates service engagement” (Yamakami, 2013, p. 395)
- ”/…/ The process of game-thinking and game mechanics to engage users and solve problems” (Zichermann & Cunningham, 2011, p. 14)
- ”/…/ the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals.” (Burke, 2014)

When there are as many definitions as there are opinions, conclusive answers and findings are hard to find since coherence in definitions, and thus assumptions, are not established. These many different definitions of gamification shows an example of how scattered academia is on the subject.
For the purpose of my thesis I prefer, and will coherently use, Deterding & Dixon’s definition. Firstly, it allows for the broadest application of gamification, both including physical and digital processes, and it is industry neutral. Furthermore, it is systemic in nature and it renders gamification outcome independent.

Secondly, since his thesis is theoretical in nature and structured as a comparison between motivational frameworks and gamification as a framework, I have excluded any definitions of gamification that includes user experiential conditions, such as the one by Huotari & Hamari (2012).

Lastly, and most importantly, “the use of game design elements in non-game contexts”, is the most commonly used definition amongst both researchers and practitioners alike (Seaborn & Fels, 2015). The Gartner prediction of gamification failure rates that underlie my research question will be strongly linked to what theory practitioners use in organizational implementations.

3.4. Gamification today

Despite the lack of research on the subject, the industry is predicted to keep growing rapidly with a compounded annual growth rate of 67,2% between 2013 and 2018 (Dekar, 2014). There are currently 116 gamification vendors listed on a leading source for gamification news and info: www.gamification.co and Google Trends show an increasing search trend. However, the growth and popularity is underpinned by controversy and doubt. Ian Bogost (2011) writes about the gamification industry as: “/…/ a grifter’s game, pursued to capitalize on a cultural moment, through services about which they [gamification providers] have questionable expertise, to bring about results meant to last only long enough to pad their bank accounts before the next bullshit trend comes along.”
A literature review done by Seaborn & Fels (2015) showed a total of 769 hits for the search terms "gamification OR gamif*" in all subjects areas on EBSCOhost, JSTOR, Ovid, ProQuest, PubMed, Scopus and Web of Knowledge. Furthermore, Seaborn & Fels (2015) made an analysis of the most commonly analysed game elements in gamification literature and found that a large extent of gamification literature mentions a very small set of game elements. Below (figure 5) is a breakdown of the different kinds of game elements found from their review:

As can readily be seen above, there is a large focus on a certain set of game elements: badges, points, leaderboards and rewards. As much as there is a high prevalence of certain kinds of game elements, such as Points, Badges and Leaderboards, in current gamification literature, there are several other proposed ones. Many scholars and consultants alike have given their respective input on the
mere definition of gamification, and a lot of have also attempted to further narrow down the definition into practically applicable building blocks.

In order to develop a deeper understanding of gamification I will proceed to outline a definition of what a game is and subsequently, how this definition as a whole can be divided into smaller building blocks: the game elements that are now today used in non-game contexts with the goal of increasing user engagement.

3.5. Definition of a Game

Defining what a game is, is truly hard and the philosopher Ludwig Wittgenstein even decreed that finding a set of characteristics that all games have in common is theoretically impossible. He instead characterizes the similarities all games share as “family resemblances” which sometimes overlap, sometimes criss-cross, sometimes they share generalities and sometimes similarities of detail. (Wittgenstein, 1953, p. 66–67)

Although Wittgenstein had issues with philosophically narrowing down exactly what constitutes a game, a definition must be constructed if any conclusions are to be made regarding the effects of games. If a game is not definable, any discussion on its properties becomes nonsensical. Avedon (1981, p. 7) writes of games as: “exercise of voluntary control systems in which there is an opposition between forces, confined by a procedure to produce a disequilibrium outcome”. Referring to video games more specifically, Zimmerman (2003, p. 96) describe a game as: “A system in which players engage in an artificial conflict, defined by rules, that result in a quantifiable outcome.” Juul (2003) proposes a more lengthy definition of a game as: “a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable.”

One of the most influential, and widely used definitions of games within gamification research is offered by McGonical (2011, p. 21): “When you strip away the genre differences and the technological complexities, all games share four defining traits: a goal, rules, a feedback system, and voluntary participation.”

McGonical describes the goals of the game as the outcome, the reason for playing and as the trait that brings the participants a sense of purpose. The rules are the limitations of enactment; they are what define the frame of play. Furthermore, the feedback system is what contributes to the player’s own understanding of his or her
knowledge or skill level and it provides motivation to keep playing. Finally, as a prerequisite for these four traits, McGonical adds the annotation of voluntary participation. She writes that everyone who is playing the game must admit to the rules, outcomes and feedback system of the game in order for it to function. It is according to McGonical important that the player has the option of leaving the game at any notice in order for this intentionally challenging and stressful activity to be perceived as fun and motivating. (McGonical, 2011)

All of these definitions have four criteria in common. They all contain a requirement of a defined outcome, such as a goal, that the player is trying to achieve. They all make reference to rules that place limitations on how players interact. A feedback system that tells the players how they are doing and a requirement of voluntary participation that postulates that everyone that plays the game knowingly and willingly accept the goals, rules and the feedback.

Any specific game could be described as challenging, boring, bland, exciting, fun, gory, frightening, tedious or engaging depending on who you ask. Everyone likes games, but the differences between what types of games people enjoy are vast. There are games catering to all kinds of people: those who play to enjoy a solitary adventure, others play for strategic thinking, fast-paced action or epic teamwork. At first comparison soccer, chess, Call of Duty, solitaire and Mario Kart couldn’t seem to be further apart – but by breaking them down into smaller building blocks, we can see that they do share some very distinct and important elements.

3.5.1. Game Elements

As presented above, the exact definition of what a game is varies and so does the opinions of what a game constitutes. The work of breaking down the game elements have been done by numerous researchers, consultants and game experts (Deterding & Dixon, 2011; Cunningham and Zichermann, 2011). Many of the definitions share common denominations but might differ in lesser content within those denominations. Others share characteristics of lesser content but not denominations.

The lack of cohesion in definitions and in general theoretical underpinnings regarding standards of practice and implementation has shown to be an issue when writing about gamification. Defining gamification as a system of game elements is inherently subjective, as metaphorically described by Wittgenstein. Additionally, early stages of theoretical discourse on gamification and the empirical research that followed have
greatly contributed to the issue of establishing an objective standard. (Seaborn & Fels, 2015)

To borrow Wittgensteins comparison: there are as many divisions of game mechanics as there are families. As gamification as a subject is still very new, opinions on what should be included and excluded is both under debate and under constant reconstruction. None is more right than the other and as of now, there are no universally accepted divisions of game design elements among neither practitioners nor scholars alike.

There is a surprising lack of frameworks that make distinctive suggestions on what specific game elements that should be included in the conceptualization of gamification.

Many scholars make mere examples of what elements could be included while making no claims to present a definitive framework (Deterding & Dixon, 2011). A majority of the applied research that has been done on gamification to this date has been concentrated to a few specific game elements (Points, Badges and Leaderboards), as can be seen in literature reviews by Seaborn & Fels (2015) and Hamari & Sarsa (2014). The use of only a few elements is also the most common critique of gamification (read: pointsification, exploitationware). However, these most commonly used examples of game elements only represent a fraction of all possible choices for game elements presented by the aggregated industry.

A functioning analysis of the relevance of gamification as a concept cannot include only the most convenient one but must also be representative of what best represents the aggregate industry usage. For this purpose, I have chosen to use a framework of game elements created by Werbach & Hunter (2012).

Firstly, Werbach & Hunter (2012) uses Deterding & Dixon’s (2011) definition of gamification. Coherency in definitions is naturally a prerequisite for a functioning analysis. Werbach & Hunter (2012: 86) writes that the framework is: “customized for developing gamified systems”, further affirming my choice: potential real-life applicability is important if the conclusion of my analysis is to be set into perspective of a larger problem statement.

Secondly, over 220,000 students have enrolled in Werbach’s online gamification course, which makes it a widely spread source for gamification knowledge. As my problem statement questions why gamification is predicted to have a large failure rate – I argue it is most sensible to use a framework with a wide reach, not only limited to readers of academic journals. I would argue that gamification is more of a buzzword than a recognized academic discourse at this point in time, and that
knowledge on the subject is spread more so through magazines and online courses than academic journals. Lastly, Werbach’s division is, with 29 different game elements, reasonable in size. For comparison, another recognized gamification expert, Yu-kai Chou, mentions 75 different ones (Chou, 2015). An analysis of a framework with as many parameters as Yu-Kai Chou’s would make conclusions hard to draw. Choosing a framework of game elements to contrast with motivational theory is in many ways arbitrary. As mentioned earlier, the lack of theoretical underpinning is in itself an industry problem and since no dominant framework of game elements have emerged – findings will differ dependent on which one is chosen.

Werbach & Hunter’s (2012) division of gamification is a segmentation ordered by their level of abstraction and granularity. The game elements are divided into smaller building blocks according to their different levels of abstraction: game dynamics, game mechanics and game components which are outlined in decreasing order of abstraction. They are tied to each other meaning that mechanics are coupled with one or more dynamics and each component is coupled with one more mechanics or dynamics – however, the authors do not offer any suggestions on how such a trail of pairings would look like.

3.5.1.1. Game Dynamics

Werbach & Hunter (2012) describe the interaction of these different game elements as different parts of a house. The highest levels of abstractions, the game dynamics, are can be compared to concepts such as “master bathrooms, structural engineering, movement flow and aesthetics”. Game dynamics are the most important of all game elements, as they constitute the concepts of the game: they create the big picture. They are aspects that need to be considered and managed although impossible to handle as direct inputs. Analogies from business would be abstract concepts such as creating specific organizational capabilities, an innovation culture or a strong corporate image. The game dynamics listed are:

- Constraints: the barriers of interaction imposed on the player. A frame deciding how interactions can be made between the players themselves but also the rules of general enactment.
- Emotions: the feelings instilled in the player when interacting with the game. Could be for example enjoyment, competitiveness or creativity. A rule of thumb is for a game designer to want to create positive emotions in congruence with the
expectations the players have for the game. Even though an emotion of fear is generally undesirable, it is what players of horror games search for.

- **Narrative:** an account of connected events. Gives the player an overarching purpose of playing the game. A narrative does not have to be in any special sequence as long as it makes the game feel whole, and not as a collection of independent events.
- **Progression:** without progression no one would continue to play. It is important to instil a feeling of forward-movement with the players. Someone training for a marathon would not want to put on their running shoes and end up constrained to doing knee-highs at the same spot.
- **Relationships:** generate and facilitate connection between participants of the game. Teamwork, camaraderie and status amongst peers. (Werbach & Hunter, 2012, p. 78-79)

### 3.5.1.2. Game Mechanics

The element of mechanics is more hands-on and could be compared to the rudiments that create the foundations of a house such as appliances, a blueprint, floors, windows and roof. Werbach & Hunter (2012, p. 79) describes the game mechanics as “basic processes that drive the action forward and generate player engagement”. The game mechanics are:

- Challenges (puzzles or other tasks that require effort to solve)
- Chance (elements of randomness)
- Competition (one player or group wins, and the other loses)
- Cooperation (players must work together to achieve a shared goal)
- Feedback (information about how the player is doing)
- Resource Acquisition (obtaining useful or collectible items)
- Rewards (benefits for some action or achievement)
- Transactions (trading between players, directly or through intermediaries)
- Turns (sequential participation by alternating players)
- Win States (objectives that makes one player or group the winner—draw and loss states are related concepts). (Werbach & Hunter, 2012, p. 79)

Each game mechanics is linked to fulfilling one or more of the game dynamics. For instance, it could be argued that for example Competition could achieve enhanced Relationships both between opposing but also cooperating players. It also instills the players with whatever Emotions the players have associated with Competition.
Further examples could be that Feedback clarifies Constraints and Progression while Rewards or Turns can clarify the advancement of the Narrative.

### 3.5.1.3. Game Components

Game components, the least abstract elements, are the nails, hammers and bricks that help build the house that is the game. Werbach & Hunter (2012) describe them as more specific mechanics, and the important ones are:

- Achievements (defined objectives)
- Avatars (visual representations of a player’s character)
- Badges (visual representations of achievements)
- Boss Fights (especially hard challenges at the culmination of a level)
- Collections (sets of items or badges to accumulate)
- Combat (a defined battle, typically short-lived)
- Content Unlocking (aspects available only when players reach objectives)
- Gifting (opportunities to share resources with others)
- Leaderboards (visual displays of player progression and achievement)
- Levels (defined steps in player progression)
- Points (numerical representations of game progression)
- Quests (predefined challenges with objectives and rewards)
- Social Graphs (representation of players’ social network within the game)
- Teams (defined groups of players working together for a common goal)
- Virtual Goods (game assets with perceived or real-money value). (Werbach & Hunter, 2012, pp. 80)
4. Analysis

This section aims to further investigate the facts presented in the literature review on motivational theory and gamification to answer the research question "Does motivational theory render gamification relevant?". Concluding, the answers made in this section will lay the foundation for my final chapter: Perspectives.

I will now analyze Kevin Werbach’s division of game elements from the perspective of Self-determination theory. Each game element will be addressed through the perspective of competence, relatedness and autonomy independently at first. The game elements effect on motivation will either be determined to facilitate (√), to be inconsequential ( ) or to undermine (X) respective need satisfaction. What needs to be noted is that I will not in this part assess any potential differences in strengths of motivational potency of the different game elements. Any further discussion on differences in potency will be made after this initial evaluation.

When establishing the relevance of individual game elements I will adhere strictly to definitions given by Werbach & Hunter (2012). While there is a general consensus on the definitions of most game elements, I want to point out that the status of relevance could be changed dependent on used definition. If an element is inconsequential ( ) in a specific need satisfaction, I will not comment on it specifically. Furthermore, I will judge the game elements solely on the merits of their definition although where possible, I will also comment on potential contextual caveats that might change the need satisfaction. While answering the question whether motivational theory renders gamification relevant cannot solely be based upon the judgment of its congruence with individual elements, it will be possible to answer as an aggregate. In order to delineate whether gamification is sensible from a perspective of motivational theory I will first use the chosen framework of Werbach & Hunter (2012), and subsequently make insights about gamification as an industry based on aggregated analysis of the individual elements.

Conclusively, I hope to be able to answer my research question of: “Does motivational theory render gamification effective?” and to offer perspective on the current state of the industry.
4.1. Game Dynamics

![Table](https://via.placeholder.com/150)

**Constraints:** Constraints can take on many forms. They are either physical barriers that frame the overall experience or that hinder players from venturing beyond what content they have currently unlocked. Constraints are also the rules associated with playing the game, commonly regarding player interaction and different kinds of win states. The use of constraints in a gamification context requires careful balancing. On one hand, it infringes on the sense of player autonomy, but on the other hand it is a helpful element in instilling ramifications for feedback of the player's recurring competence level. A Constraint is thus a double-edged sword from a motivational perspective: without constraints, autonomy would prove to be highly facilitated as the player is essentially fully self-directed but the game would in itself be irrelevant because of the lack of guidance. On the other hand, a large amount of Constraints enhances the speed of learning as constraints help clearly define the path that needs to be taken. In essence, Constraints are themselves frames that help the game-designer construct and prioritize information and journey that the player is undertaking. This is what Deci & Ryan (1985) would call the act of balancing...
between controlling, informational and permissive environments. The ultimate goal of introducing constraints in to a process would be to guide competency, but avoid doing at the expense of autonomy.

**Emotions:** The emotional aspect of gamification is dependent on whether the emotions experienced by the user are aligned with the user’s expected Emotions. Surely, a good use of gamification in a work environment is to instil positive feelings rather than negative. Important to note though is that some users do expect to experience emotions that would on a general note be considered as negative. However, if that is the intended experience – the outcome should be deemed positive. The wide ranges of emotions available to humans all have different effects and consequences to the work. In general, a game designer would want to instil feelings that enhance competence or autonomy of the player.

However, using the game element of Emotion as an objective factor paired with the affordances of SDT theory proves to be too arbitrary to be of value. The concept of emotion is such a broad concept that it makes sense to score it anywhere in our given range, as it will depend on the context and the user.

**Narrative:** A Narrative is the journey of the user and it brings a story to the purpose of the game: it creates a connection between the user and the less abstract game elements through a compelling storyline. A great Narrative will make the user immersed in the game, create an emotional connection with the characters in it and makes the player feel relatedness to what they experience. It gives is an account of connected events and gives the player an overarching purpose of playing the game. A narrative does not have to be in any special sequence as long as it makes the game feel whole, and not as a collection of independent events. As much as there is intuitive rationale for connecting the player with a purpose through a story – I cannot identify any relevance for independent application to foster engagement through competence, autonomy or relatedness.

**Progression:** The concept of mastery is highly correlated to Progression, when there are no further possibilities for Progression or improvements – one can be said to have mastered a subject or a skill. As such, the element of Progression is highly correlated to satisfying the need for competence. If no progress is made, the need for competence won’t be satisfied.

However, there is a caveat associated with the Progression dynamic, and facilitating the need for competence in general. Stemming from CET, SDT theory argues that it is of utmost importance that progression made can be linked to a *perceived internal*
locus of causality (deCharms, 1968) as any progression made lacking attribution to self-direction will actually undermine intrinsic motivation.

4.2. Game Mechanics

<table>
<thead>
<tr>
<th></th>
<th>Challenges</th>
<th>Chance</th>
<th>Competition</th>
<th>Cooperation</th>
<th>Feedback</th>
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<td>Autonomy</td>
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Figure 7. Overview of the relevance of game mechanics according to SDT.

**Challenges:** Challenges are a great tool to test the level of competence attained up to a certain point. Challenges are present in all game-scenarios, as they are inherently a part of the attainment of a goal: it creates a distinct path in the goal pursuit.

According to SDT theory and specifically flow-theory (Csikszentmihalyi, 1975), it is of utmost importance that the level of Challenge is carefully balanced as to not under stimulate the need for competence – but at the same time to not stretch the capabilities of the player too far. If either of these scenarios incur, SDT theory posits that the player will not experience facilitation intrinsic motivation. All considered, Challenges are an integral part in competence facilitation

**Chance:** The distinction of CET theory posits that competence can only be enhanced if the action is perceived to originate from the person’s own self; that is within the person’s own locus of causality. It also says that if there is no perceived connection between the action and the outcome of the action, intrinsic motivation will
be undermined. Per definition, Chance cannot be controlled: Chance is an element that is outside of the player’s locus of control and will therefore impede the feelings of competence if it inflicts player loss, while not sufficiently enough affecting competence if it incurs player win. This will naturally change depending on the degree that Chance is present – but as a concept, it undermines competence.

**Competition:** The presence of Competition can be both an element of spurring, but also an element of stress – depending on how the player is doing in the Competition. Generally, strong elements of Competition will encourage winners while discouraging losers. Feelings of competence will be enhanced by win-states in competition while loss-states decreases feelings of competence and thus diminishes intrinsic motivation. Competition can thus both facilitate and undermine intrinsic motivation depending on how well the player is doing, or not doing.

**Cooperation:** The act of Cooperating in teams should in general facilitate the feelings of relatedness. I would argue that it could also impede both on autonomy and competence as Cooperation entails some degree of teamwork, which is an imposed frame, and can also render outcomes to be outside the locus of causality. That being said, the effect on autonomy and competence is contextual and will therefor in my analysis be deemed inconsequential.

**Feedback:** The element of Feedback is one of the most important ones, as it clearly states where in the competence continuum the player exists. Good feedback cannot be underestimated and the goal of it should be to be as objectively and encouraging as possible. However, Feedback can also undermine competence if it is perceived as unjust or if it is highly negative, without offering any suggestions on areas of improvement.
Resource Acquisition: Resources in a game are visual representations of competence and the acquisition of these do not in itself strongly correlate to any need satisfaction. Once again, the effect of on the need satisfaction of competence is highly dependent on the connection between how the resource was acquired and the perceived locus of causality. If resources can be attained by chance or merely by partaking in the game, they will not affect competence However, I will in this case view resources as visual representations of achievement and therefor, deem the element relevant for the need satisfaction of competence.

Rewards: A Reward is a broader categorization of resource, often pictured as a price for overcoming an especially difficult task. As with Resource Acquisition, the effect of Rewards on intrinsic motivations cohere strongly with the extent of perceived causality with the player; competence will be enhanced if rewards are given in connection to a task well-done through a self-initiated act. It might have the opposite effect if rewards are given arbitrarily without a clear connection to task.

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**Figure 8. Overview of the relevance of game mechanics according to SDT.**

<table>
<thead>
<tr>
<th>Game Mechanics</th>
<th>Resource Acquisition</th>
<th>Rewards</th>
<th>Transactions</th>
<th>Turns</th>
<th>Win States</th>
</tr>
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<tbody>
<tr>
<td>Autonomy</td>
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<td>Competence</td>
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45
performance. The effect thus depends on the perceived correlation between the reward and the action.

**Transactions:** The act of conducting Rransactions is in itself voluntary and done between two parties. Normally a transaction entails a trade of resources such as items, information or goodwill. Since it is an act done between two players, it is relevant for the need satisfaction of relatedness.

**Turns:** I cannot find any relevance of Turns, pairing it with Self-determination theory.

**Win States:** Win States are a complex matter as they relate to rigid states of existence: either the player has won, or it has lost. Win States are essentially about the framing of a game’s end-state. Some games might not have defined winners or losers per se, but regardless of their pairings, there will always be a way to delineate performance in a game. As such, winners will have their intrinsic motivation increased (once again, if paired with a perceived internal locus of causality) and losers will have it undermined through its effect on competence.

### 4.3. Game Components

<table>
<thead>
<tr>
<th>Game Components</th>
<th>Achievements</th>
<th>Avatars</th>
<th>Badges</th>
<th>Boss Fights</th>
<th>Collections</th>
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<tbody>
<tr>
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Achievements: There is wide a range of different achievements in a game and within organizations wanting to utilize gamification. Achievements are most often rewarded to players for reaching a defined objective but could also be given for making an extraordinary contribution or rare finding. Regardless of the background of the Achievement, it is first and foremost a testament of competence. Reaching a defined objective is the completion of a goal and a way of saying to a player that his or her contribution has been satisfactory and that the person’s level of competence is high enough to suffice recognition. As all tasks competence related, intrinsic motivation will only be enhanced if it is accompanied by autonomy. If the Achievement is reached as a consequence of factors outside the person’s control, intrinsic motivation will not be enhanced.

Avatars: The visual representation of a person’s in-game character is an extension of the self. Many of today’s most popular video games have a wide variety of customizable slots that players can utilize in making their avatar more like themselves, or in any other way they want – however, the autonomy support that choice can induce is context dependent and therefore avatars must be deemed inconsequential for facilitating need affordance.

Badges: Badges are visual representations of achievements within the game. They can usually be found as informational pieces in player profiles, portraying the achievements of certain players. Badges are very similar to the achievement component in how they relate to the satisfaction of needs. The only major difference between the act and the representation of the act is the latter’s relational focus. While an Achievement can be kept private, a Badge inherently exists to show others – it is a token of competence communicated to your surroundings (while a badge can be private, one might then as well call it an Achievement). Its purpose is to show others your competence and to garner respect.

Boss Fights: The component of Boss Fights relates to an especially hard challenge that is supposed to take the player’s skill level to its absolute peak. Overcoming a Boss Fight in a game environment will lead to stronger feelings of satisfaction than normal challenges as they are recognized to be harder. The comparison of Boss Fights and Challenges in a game would be equal to comparing final tests with pop quizzes in a school environment. They are the pinnacle of competence and often come paired with an achievement in the form of a Badge for overcoming, as a grade.
on a student’s transcript would be the Badge for a Boss Fight. As the Boss Fight is simply a grand challenge, the need for competence is the only need satisfied on completion.

**Collections**: Collections are sets of items or Badges that together form a greater extrinsic worth than the separate parts alone. Collections can be seen merely as a continuation of a visual competence spectrum starting with Achievement followed by Badges. Obtaining a Collection would per definition be paired with the obtainment of an external reward.

<table>
<thead>
<tr>
<th>Game Components</th>
<th>Content Unlocking</th>
<th>Combat</th>
<th>Gifting</th>
<th>Leaderboards</th>
<th>Levels</th>
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<td>✓/X</td>
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</table>

*Figure 10. Overview of the relevance of game components according to SDT.*

**Content Unlocking**: Content Unlocking is a sign of Achievement where the player receives new options as he or she progresses. These options can be increased customizability of the Avatar, access to new Challenges, or proofs of Achievements such as Badges or increasingly difficult Levels. The need satisfaction in Content Unlocking would be competence satisfaction, if it were linked to any Challenges.

**Combat**: The component of Combat in games is an important part of Challenges and a great way to test a player’s skill level. Combat is a form of real-time
competence evaluation that is present in many games in one form or another. The transfer to a corporate context is not obvious but could be used in potentially be used in training simulations where it would facilitate competence.

**Gifting:** The act of Gifting is linked to the Transaction mechanism and the opportunity to share resources with other players. The act of Gifting is fundamentally about making connections by creating goodwill. The need that is satisfied is relatedness as Gifting is fundamentally about expressing care for others. It is a recognition made done in order to create self-esteem by a selfless act.

**Leaderboards:** Leaderboards are representation of rankings among a group of players. Main focus of a Leaderboard is the top levels as they provide a benchmark of competence. The Leaderboard might prove to have many different effects on motivation. For some people, it can inspire greater effort but might be disconcerting for others who do not feel they will ever measure up to the competence required. As with Win States, Leaderboards is a double-edged sword motivating winners who gain peer recognition and a competence confirmation but it also runs the risk of undermining motivation for low performers. Overall, Leaderboards can both undermine or facilitate competence.

**Levels:** The defined steps of Progression that different levels represent are often linked to Achievements, Content Unlocking and Badges. As such, Levels are also helpful in fostering intrinsic motivation, as they are good ways of providing information on competence level. A higher level means a higher showcased competence, and thus higher skill.
**Points:** Points are awarded to players dependent on performance. Points are highly correlated to competence where higher performance garners more Points. As with any competence indicator, it is very important that Points are a true reflection of performance and not subject to things outside the perceived locus of causality. If Points are awarded arbitrarily for seemingly random reasons it will not foster intrinsic motivation. Furthermore, if the distribution of Points is in any way perceived as control mechanism, it will undermine the need for autonomy and thus lower intrinsic motivation.

**Quests:** The Quest component is a usually a bundle of Challenges coupled with other components at the end. Common rewards for Quest completions are Challenges, a new Level, Virtual Goods, Content Unlocking, Points, Badges or Achievements. The main purpose of playing a game is often to finish a grand Quest framed as a macro narrative with sub quests as micro narratives. In a work context, the grand Quest of the HR department is to manage and grow the human capital of company, and within this main purpose lay part tasks such as recruiting and employee relations. As a Quest is per definition a set of challenges, it strongly correlates with the need for competence.

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**Figure 11. Overview of the relevance of game components according to SDT.**

<table>
<thead>
<tr>
<th>Game Components</th>
<th>Points</th>
<th>Quests</th>
<th>Social Graphs</th>
<th>Teams</th>
<th>Virtual Goods</th>
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<tbody>
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<td><strong>Competence</strong></td>
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Social Graphs: Representation of the in-game social network of the player. A broad categorization of different kinds of social mapping which all shares the overarching purpose of visualizing the player within the larger context of the game. A key factor in establishing relatedness although not necessarily fostering it; a social graph will not necessarily increase the need for relatedness but can help facilitate the cultivation of relations. Overall, I would argue that it has relevance for relatedness as it connects the player to the larger social context.

Teams: A gathering of players striving towards a shared purpose. Strong relevance for the need of relatedness but also risk negatively affecting autonomy as team preferences might overrule individual self-direction. It might also be harder to delineate individual performance within teams; it might not be possible to connect win- or loss-states might to the player’s own perceived locust of causality and consequentially might infringe on the need for competence.

Virtual Goods: In-game assets which depending on the game economy can be transferred or exchanged for real life rewards. An example of this could be how weapons or armour in online game accounts sell for hundreds to thousands of dollars on eBay. Virtual Goods as extrinsic rewards are representations of competence and as such, are relevant for its need satisfaction, although they do not in themselves enhance the need satisfaction.

4.4. Summary of Game Elements

The layout for this subchapter of the analysis will first present a general overview of the findings made in the pairing of game elements with the three motivational affordances. I will in this section begin by addressing my initial question that has guided the research done on the subject. Secondly, the subchapter will address the research question’s overarching problem statement: Gartner’s (Pettey & van der Muelen, 2012) predictions of gamification failures. Research on motivation guided by SDT will attempt to uncover potential reasons for these predictions, if any can be found. Any implications found in this second part will then be presented as avenues for further research in the sixth chapter, Perspectives.

A summary of proposed pairing of game elements and motivational affordances are presented below. Except for the game elements Emotions, Narrative, Turns and
Chance (the last two being impeding to autonomy and chance respectively) all game elements could be individually, positively paired to one or more of the motivational affordances. Each game element is listed under the motivational affordance that it has been deemed as a facilitator of. Some of the game elements facilitates more than one motivational affordance and will thus be presented in more than one category:

- For autonomy: no isolated game element were found to have relevance for need satisfaction
- For competence: Progression, Constraints, Feedback, Competition, Challenges, Resource Acquisition, Rewards, Win States, Achievements, Badges, Boss Fights, Collections, Content Unlocking, Combat, Leaderboards, Levels, Points and Virtual Goods were found to have relevance for need satisfaction
- For relatedness: Feedback, Cooperation, Transactions, Teams, Gifting and Social Graphs were found to have relevance for need satisfaction

A visual breakdown of the pairings between need affordances of SDT theory and relevant game elements can be found below (figure 12).

Figure 12. Summary of pairing of game elements with SDT theory.
As can readily be seen above, there are clear indications that independent game elements can support engagement levels through foremost competence facilitation but also to certain extents through relatedness. However, I have not found any relevance of leveraging independent game elements in facilitating autonomy. Whereas one could argue that there is relevance for using gamification to elicit engagement through relatedness and competence, these findings bring further complexity considering the question within the larger problem statement of predicted failure rates of gamification initiatives addressed in my introduction.

Naturally, assisting in, or even fully, establishing a theoretical underpinning cannot completely, neither confirm nor deny the efficiency of any gamification initiative in general, or any single case study alone. Regardless, I am going to address potential unintended consequences of implementing game elements to elicit employee engagement adding perspective on why gamification initiatives are failing as predicted by Gartner (Pettey & van der Muelen, 2012). If independent game elements do show relevance from a perspective of SDT, what is the reason for the high failure rates associated with implementing gamification initiatives in a corporate context?

4.5.1. Autonomy
The key reason for leveraging game elements in non-game contexts has always been anchored in observations of the strong engagement levels shown in video game players. However, looking independently at game elements proposed by Werbach & Hunter (2012) it could be argued that the undeniable popularity of video games as an entertainment form could actually have less to do with in-game facilitation of autonomy and more to do with what McGonical (2011) writes of as one of four key criteria in video game success: voluntary participation. Voluntary participation, or volunteerism, is in itself per definition the highest-level order of autonomy. Deconstructing video games into smaller building blocks, I have found that the extent of autonomy facilitation attributable to independent game elements is according to SDT non-existent. I argue that this gives credence to believe that it is not in essence autonomy support attributable to certain few game elements that can improve intrinsic motivation in employee engagement, but rather that it is the competence and relatedness aspect commonly found in games.

In a corporate context, unless the person in question is doing work that he or she would voluntarily undertake stranded on a deserted island – there are no added game element that can by themselves elicit the voluntary participation that are
associated with McGonical’s (2011) fourth key criteria in the definition of video games.

Furthermore, as implementing gamification initiatives that are to a large extent focused on giving the player external rewards (Points, Badges, Leaderboards, achievements etc.) can in fact decrease motivational levels in employees, the effect of gamification initiatives would be highly dependent on whether the subject person would view the gamification initiative as controlling or informational.

As such, it can be argued that herein lay a first reason as to why gamification initiatives at this time show, and are predicted to continue to show, high rates of failure. SDT shows no rationale for the supposition that independent game elements can illicit engagement to the extent that video games can. In essence, the basic underlying assumption of the potency of gamification for enhancing engagement is flawed – games are based on voluntary participation, but as game elements are essentially frames imposed on a player, or employee in a corporate context, the medium itself will never be self-directed. The level of self-direction is instead directly attributable to the extent that the employee feels self-directed in his or her own work. What is important to note however is that through the addition of a larger system of a game elements, autonomy enhancement could be supported, once again echoing what Ryan (2006, p. 349) writes of video games: “game designs that provide considerable flexibility over movement and strategies, choice over tasks and goals, and those where rewards are structured as to provide feedback rather than to control the player’s behavior.”

While the game elements independently will not add to autonomy support, the illusion of choice that several options can bring could possibly enhance self-direction. This system of game elements, or what Ryan (2006) calls “game designs”, I argue is closest to what Werbach & Hunter (2012) calls Constraints. Ironically enough, it is the absence of the dynamic rather than the presence that elicits autonomy; the balancing of constraints is one of autonomy versus competence. Without any Constraints it will be impossible to enhance competence and with too many constraints, autonomy would disappear. This balance between autonomy and competence I would argue is dependent on organization, but in general wishes of the organization is for its employees to do the job they are hired for, even if that would undermine their self-direction. Employees are constrained to the tasks that they are hired to perform and if the organization wants to increase employee competence in
these tasks, the introduction of gamification might make that easier – but it will not change the base level of autonomy felt by the employee.

I furthermore argue that the lack of autonomy support identified in the set of independent game elements reviewed has negative implications for the gamification industry aiming at the enterprise. While this standpoint could leave space open for discussions on semantic definitions on what entails engagement and whether there is reason to even view analyzing the building blocks of gamification separately, the perspective I take departure from is that engagement is equivalent to intrinsic motivation and with the lack of game elements addressing autonomy, gamification will inevitably fail in eliciting true engagement. As such, I would argue that the underlying assumptions of motivational potency attributed to gamification initiatives today are inherently flawed. The recurring definition “the use of game design elements in a non-game context” cannot truly create engagement if there are no game elements that independently support autonomy. By provision of increased choice through certain quantities or combinations of game elements, players might feel increase autonomy – however researching gamification from that angle lay outside the scope of this, introductory exploratory, thesis.

Companies are built on the foundational goals of turning profit and as time passes, processes of best practices are built. While these best practice processes will likely contribute to the goals of the organization they will not be congruent with the worker’s need for self-direction. For example, if a call center creates a strict template for how to address outbound sales calls, workers will inevitably feel less motivated as he or she will not feel as the initiator of their own actions. Instead, it is the written corporate template that determines how action will be initiated. Simplified, the addition of game elements in work is an extra layer in attempting to frame employee direction and per definition; additional, independent frames cannot foster self-direction thus rendering the addition of independent game elements irrelevant for autonomy support.

### 4.5.2. Competence

Although the breakdown of game elements paired with the motivational affordances of SDT did not show any relevance for autonomy support, I have found a large amount of game elements supporting competence facilitation.

Continuing the discussion on the effects of frames on autonomy, I argue that it is with the same reasoning that game elements are a great addition for competence facilitation. Game elements as frames assist the player’s understanding of the
relative importance of what he or she undertakes: challenges, points, leaderboards, quests, progression and levels, helps the player make sense of what his or her objectives are. These game elements can act as tools for delimiting scope of interaction, helping the player understand what is important and what should be accomplished. For example, if a player gets points for a certain action – he or she will be induced to focus efforts on doing more of that action, and do it better.

Even though there are many game elements that show relevance for competence facilitation, no obvious conclusion on the Gartner (Pettey & van der Muelen, 2012) predictions of gamification failure can be directly identified in pairing SDT with any single game elements.

The key takeaways for the overarching problem statement I believe could instead have more to do with practitioners failure to identify the contextual relevance for certain game elements. Much of the criticism of gamification (Bogost, 2011; Robertson, 2010; Perryer et al, 2012) has been connected to its superficial application and looking at gamification from a SDT perspective, I would argue that these claims could carry some weight.

While much of the strength of gamification lies in its ability to foster competence, these needs should be taken into careful consideration as many of the elements connected to competence are per definition external rewards which SDT argues can have severe implications on people’s levels of engagement (Deci, 1971; Lepper, Greene, & Nisbett, 1973). In fact, Ryan & Deci (2000, p. 59) writes that: “virtually every type of expected tangible reward made contingent on task performance does, in fact, undermine intrinsic motivation”.

CET posits that in order for intrinsic motivation to be truly enhanced, the person needs to feel as if the outcome of the action stems from him or herself. This is what deCharms (1968) describes as the necessity of the action to have a perceived internal locus of causality. If there is presence of rewards in a game scenario, it is first of all of high importance that the person feels that the rewards originate from an action directly related to a feat of competence. This would mean that there, in the creation of gamification initiatives, lay a fine balancing act in making sure that any rewards-inducing act is not done on arbitrary grounds, but only received when the person shows competence. If as an example Points, Badges or Collections were awarded a participant solely for participation, or by a Chance encounter, it would induce negative intrinsic motivation. Self-determination theory argues that the introduction of external rewards can have severe implications on the levels of intrinsic motivation in people. Implementing gamification initiatives that are to a large extent focused on external rewards can in fact decrease motivational levels in
employees, but it would all depend on whether the subject person would view the gamification initiative as a reward or not. As such, I would argue that while gamification can still carry relevance for eliciting engagement – the use of game elements will be highly dependent on the time frame and context chosen for implementation. Adding game elements with characteristics of external rewards would mean that employee satisfaction becomes contingent on a continuous reinforcement of the strength of these elements, thus making it non-suitable for longer term projects where continuous reinforcement is not possible or would be deemed costly. (Amabile, DeJong, & Lepper, 1976; Deci & Cascio, 1972)

What needs to be understood is that while game elements in themselves are functionally simple and cheap to add to a process, the framing that they represent cannot be risked carrying the same sentiments. If the employees were already intrinsically motivated to undertake their work tasks, extrinsic rewards would only diminish their long-term productivity, as their levels of motivation would switch to be conditional on extrinsic rewards.

However, I would argue that there is reason to believe that adding external rewards can be positive in work contexts where employees show low levels of intrinsic motivation, as suggest by Ryan & Deci (2000). A lot of the tasks we undertake in our daily lives are not done for our inherent satisfaction; in fact, a majority of the activities we undertake during the day are not fun in themselves but are rather done to avoid punishment or to obtain a reward. Ryan & Deci (2000) writes that the undermining of intrinsic motivation only holds true for activities that are already done for intrinsic motives, for all the other we undertake we need to consider external rewards as motives. Implementing any of the game elements that are inherently external rewards could in essence only lead to two scenarios. Either, the workforce will happily engage with the newly implemented frame, chasing Points, wanting to climb Leaderboards, collect Badges, or the new frame of external rewards will undermine the intrinsic motivation of the workforce. However, while both categories of employees – the baseline intrinsically motivated and the externally motivated – would feel the effects of the new frame, intrinsic motivation would remain unchanged for the former, and will probably even diminish with time.
Depending on where in the continuum (figure 3) between amotivational and identification the person is, they will have different attitudes towards the extrinsic reward. The lesser value of intrinsic motivation at the starting point, the greater the impact of external rewards. However it will not change the fact that even introducing game elements to support engagement in employees with amotivational affordance will carry risk of creating unintended consequences.

From a social constructionist perspective, this also poses further risks for the company. As game elements themselves are frames that try to affect human behavior, they will inevitably become potential conduits of overflows. This means that by implementing a points system for engaging with certain tasks, motivation to do this task should increase – however, the extra focus put on this task might lead to diminished activity in other tasks, or total disregard for what is truly important for long-term value delivery.

A telling example of this could be a customer service department that has been deemed disengaged, slow and/or lacking manners. Management has read about gamification and the promises of engagement that these kinds of services could bring and decide to test it, implementing a Points, Badges and Leaderboards system. The Points, Badges and Leaderboards are all set up with the intention of increasing a certain metrics in mind. If for instance the metric is identified to be speed of service, and points being rewarded for serving customers under the identified benchmark, the overflows might be that in the pursuit of faster service the customer service representatives do not give the right service. Framing the customer service function with points gathering for a certain action could create overflows that lead to worse service.

Addressing my introductory problem statement I argue that there is reason to believe that a lack of understanding about the motivational effects of external rewards can be a potential reason for why gamification initiatives are failing today. As shown by Seaborn & Fels (2015), a sizeable part of current gamification discourse is focused on game components such as Points, Badges and Leaderboards. As theoretical underpinning in the gamification industry is still weak, I argue that there is reason to believe that a lack of understanding of the potential adverse effects of external rewards on intrinsic motivation could be a reason for why many gamification initiatives fail to reach intended objectives.
4.5.3. Relatedness

The second most pertinent motivational affordance found in my analysis of game elements was relatedness. Relatedness is also the affordance that least research has been done on in SDT. To repeat: one of the key factors of the need for relatedness is the belongingness hypothesis (Baumeister & Leary, 1995), which posits that humans have a pervasive need to form and maintain positive relationships. The elements I found relevant for relatedness are Teams, Cooperation, Gifting, Social Graphs and Transactions.

While the amount of game elements relevant for relatedness is small, I would argue that the implementation of at least a few of them is essential for a gamification initiative to be successful. This is also one of the big reasons for why video games (and gamification) have seen such a phenomenal increase in popularity in recent years. It is the addition of multiplayer, the possibility of engaging together, towards an objective or “greater cause”. While one part of relatedness affordance argues of the importance of strong, intimate bonds, there is also another part that shows the importance of many weaker ones. As long as the interactions are positive, relatedness facilitating game elements should add as a positive contribution to intrinsic motivation.

The implications for the predictions of failure of gamification initiatives with relevance for relatedness are not apparent, if existent, at all. In order to identify the connection between relatedness satisfaction and gamification failures, one would have to look at case studies of gamification implementations with relatedness elements included. One potential reason could be that the game elements connected to relatedness are not well backed by a culture of teamwork or camaraderie. Game elements as frames can either be strong or weak and introducing any element without the proper supportive functions will always risk having them fall flat.

Furthermore, many of the elements connect to each other. When looking at definitions of, for example, individual components, we can see that they are very much alike and might for instance be internally separated into further sub hierarchies. As an example, there are numerous game components that all are connected to Achievements. Badges, Levels, Quests, Leaderboards, Content Unlocking and Collections are all visual representations or rewards for an achievement. While I have not found any SDT research addressing the aggregation of multiple elements effect on a need.
Using McGonical's (2011) definition, the breakdown of game elements show a great emphasis on the first three defining criteria of what constitutes a game: rule-based systems, having a clear goal, and a feedback system. The two first criteria are in essence what Callon (1998) would consider frames. Systems are per definition attempts to contain interactions; adding goals is steering these interactions toward set objectives. All of the competence-facilitating game elements are frames that both independently and as an aggregate help form systems that attempt to influence players.

In a corporate context this means that the addition of game elements could help management frame employees to pursue overall company objectives. Game elements as successful addition of objectives framing herein assumes that thorough understanding of employee’s social construction is taken into consideration as all frames are always potential conduits of overflow (Callon, 1998).
5. Conclusion

This chapter will summarize the findings I have made in the analysis, conclude the answers to the research question and some general thoughts on the relationship between gamification and SDT from a social constructionist perspective.

Initial reading about gamification provoked a myriad of questions but in the end, I could not find any conclusive answers to the single most important one. Does gamification work and, if so, why? This is a question of utmost prominence both to academia and organizations that are now heavily investing in gamification applications. I was surprised to learn that this single, overarching question had not yet been answered and has this thesis has thus been guided by the question:

“Does motivational theory render gamification relevant?”

Through exploratory research, pairing Werbach & Hunter’s (2012) framework for game elements with Ryan & Deci’s (2000) self-determination theory, using the social constructionist theory as theory of knowledge, I have found confirmation of industry assumptions: motivational theory does render gamification relevant, but with several caveats.

As much as a single game component could show strong correlation to either the need for competence, autonomy, relatedness or combinations of all three – the definitive effect is subject to the overall framing of the situation; the specific mix of components, the purpose of the task at hand and the users subjective opinion of the initiative. One thing is clear however, and it is that self-determination theory renders gamification relevant in satisfying the needs for both competence and relatedness. However, no indication for the facilitation of autonomy has been identified in the game elements used by Werbach & Hunter (2012).

First of all, it should be noted is that my analysis is built upon only one of several prominent frameworks for game elements, and only one of several theories of motivation. In my analysis, elements were found to be heavily weighted toward competence inducing need satisfaction, which might not be the case if other frameworks had been chosen.

However, I predict that the choice of gamification framework will be inconsequential for final findings when paired with SDT as all game elements are frames, which according to SDT will per definition undermine autonomy and facilitate competence.
Regardless of the nature of the element, the potency of it, or the intention behind the implementation of it – an introduction of gamification in the workplace will, according to social constructionist theory always be seen as an imposition of a frame on the employee. These frames will invariably be subject both to any prior understanding the employee has of the world, interactions made with colleagues and the workplace in general. The nature of framing, that all people construct reality differently, will inevitably cause different effects dependent on where gamification initiatives are introduced. Whereas every game element introduced in an organization has its own reason for existence, it is also inevitably act as a conduit of overflows. (Callon, 1998) For example, this could mean that the introduction of a Leaderboard to spur competition can instead create lethargy in a workforce that sees it as a source of stress. Certain employees, most likely the ones at the top of the leaderboard, might see it as positive – the Leaderboard frames their understanding of their contribution in a positive light. Others, possibly the ones on the lower end of the board, might see it as a surveillance device or as an attempt to publicly humiliate their low efforts. However, regardless of the affect of the frame, any further attempts to manage these emotions will inevitably create new conduits of overflow. The range of reactions that can be stirred with the introduction of a frame is as broad as the full palette of human emotions. Without thorough understanding of the affected users, the nature of the conduits of overflows will be impossible to predict.

This creates an interesting paradox between motivational theory and the relationship between frames and overflows. More specifically, whereas self-determination theory argues that there are three universal needs that either enhances or undermines motivation, social constructionist theory posits that the effect is subject to how the recipient interprets the influence on the need. Regardless of the intention of the introduction of gamification, and the motivational relevance it might have to a certain need affordance, its effect on the need affordance is entirely subject to the interpretation of the recipient. Within what seems to be a poignant paradox of motivational efficacy however lies a most important note: there is no end-all, cure-all, easy slapstick solutions to the problem of engagement in the workforce – or any other parts concerning human interpersonal or intrapersonal questions.

The gamification industry of today is to a large extent made up of evangelists who proclaim it to be the end-all solution to motivational deficiencies in today’s organizations. However, this ambitious assumption of the medium has not so far been accounted in light of the complexity of human motivation. Judging from my findings, it does seem as if the terms exploitationware and pointsification could be
apt descriptions of parts of current gamification discourse, but at the same time, these claims do not take into account the full spectra of the potential ways to leverage gamification. While my exploratory research has de-scoped parts of current discourse through the addition of a theoretical underpinning – definitive conclusions on the potency of gamification as a way to eliciting engagement is still impossible to draw. In order to prove any claims, empirical tests need to be conducted and as the gamification industry continues to grow and as companies jointly continue to attempt to implement it – the informational foundations for such research will grow with it. The key takeaways of this thesis opens up for a few interesting areas to look into as an introduction for future research. I will present these potential avenues of research in the next chapter below.
6. Perspective

The following final chapter is going to present some perspectives that the implications of that the findings in this thesis might have for an organizational context. Furthermore, I will give suggestions on possible areas and hypothesise for future research.

While the growth trajectory for gamification offered by Gartner (Pettey & van der Muelen, 2012) looks very promising, the future of the industry and the two-sided discussions on the motivational rationale of utilizing game elements will rage on until further research and empirical testing has been conducted in the area. As much as video games are becoming the go-to recreational activity of today’s youth, spreading far and wide in popular culture, the use of these individual game elements outside of their normal context show indications to be more complicated than first suggested. While industry predictions of game elements gives credence to the hypothesis that gamification can act as sources for eliciting engagement – my analysis shows more conservative indications.

I am in this section going to list areas of research that I believe would be beneficial to examine for in the future. My initial delimitations were guided by Ryan’s (2006, p. 349) position on researching motivation in games, stating that: “a true theory of motivation should not focus on behavioural classification constrained by the structure of a particular game, but instead address the factors associated with enjoyment and persistence across players and genres, and how games that differ in controllability, structure, and content might appeal to basic human motivational propensities and psychological needs.” I have found that, while basic human needs are universal, the way people interpret cues relating to these will inevitably differ. While we are all driven by competence, relatedness and autonomy, one person might deem an interpersonal interaction as positive whereas another one might deem it as negative. While one person might deem feedback constructive, it might pose as too harsh of a criticism to someone else. As much as games interdependently share family resemblances, so do we humans – what makes one person motivated might bore someone else to sleep. Applying powerful frames with broad strokes in situations like these, when the user-base might be dispersed or very heterogenic, poses a big risk for organizations looking to utilize gamification.

Firstly, I hypothesize that one reason that gamification initiatives are failing might be because of mismatching game elements and organizational contexts.
Comparing what Wittgenstein wrote about games: the resemblances members of a family share might deem one child beautiful, and another unattractive as much as one game component might work in one context, but not in another. The nature of work is seemingly infinitely varying. Naturally, there are standardized roles of the workforce yet the exact responsibilities of any given role in a horizontal comparison between different companies will vary. The end-result for the organization could be that the game elements introduced in a certain department does not sufficiently support the goal of another department. On the contrary, it might even thwart the effects. Furthermore, certain game elements might not be suitable for certain industries, jobs or departments. For example, the effects of introducing a Point system might show large differences if implemented in an accounting firm contra a facility services company, if implemented in a marketing department contra a sales department or if implemented among creative professionals contra train conductors. Adding external rewards in an environment where intrinsic task motivation is high will according to SDT diminish intrinsic motivation. While adding extrinsic rewards can be beneficial for task environments where intrinsic motivation is low, it also introduces the risk that the frame that the game elements are eliciting actions opposing intended corporate objectives. I offer the following suggestion for future research:

**Test the engagement levels before and after the introduction of a Leaderboard, or any other independent game element, in four different kinds of companies.**

Second, I hypothesize that the effect on engagement as a consequence gamification implementations might have different effects depending on the target demographic. Social constructionist theory posits that all humans carry different interpretations of reality and thus the introduction of any frame will create different consequences for different people. Thus, in order to successfully execute the implementation of gamification in a company process, the characteristics of the workforce and the nature of work needs to be sufficiently understood as a first requirement. As all people carry their own unique set of experiences, the way they interpret the world will invariably differ between every single individual on the planet. Naturally, in order to implement a successful frame, there will be no need to go to such a granular level but I would argue that there is strong reason to look at groups of people and their receptiveness to gamification. The first demographically interesting separation would be between old and young which essentially goes back to testing the hypothesis of “Digital Natives” and their appetite for everything digital by Morris & Venkatesh (2010). I believe it is quite possible that older generations might deem the
introduction of game elements as unserious and unworthy of having a place within a corporate context. If the audience of the initiative is not receptive to the initiative – it matter not how great the potential for motivational affordance it might have. A potential reluctance could even have to do with the way gamification is presented in itself, as a way to enhance a non-game context with playfulness. In essence, I argue that the perception of gamification of the target demographic will have an effect on the extents “voluntary participation”, one of McGonical’s (2011) four definitive criteria for video games, and as such also an equally large effect on autonomy levels. I offer the following suggestion for future research:

**Conduct an attitudinal survey prior to an organizational introduction of gamification. Measure the engagement levels after a set period of time and cross-reference with survey results.**

Third, I hypothesize that the success of gamification implementation will correlate to how well the initiative is supported by management. The introduction of a new initiative, especially one as hyped for its promised effect as gamification, will inevitably elicit opinion among the workforce. And as with any change, it needs to be properly managed. Whereas my findings show a large prevalence of competence facilitating game elements, it is possible that a reason for the failings of current gamification initiatives could be a lack of top-down supportive structure. A managerial failure to recognize gamification as merely a tool for framing interactions could potentially mean that proper investment in implementing the initiatives are not made. An example could be a change management program wanting to educate employees in a company-wide implementation of a new software system. However, if the rationale for the software system has not got the proper managerial support, or explanation of purpose – it could fail merely by a lack of understanding of rationale. The strength of a system leading to a certain objective will never succeed if the purpose is lost on its participants. I suggest conducting the following research:

**Interview management either on their attitudes prior to a gamification initiative, or their attitude after failing and crosscheck attitudes towards gamification with success rate.**

Fourth, I hypothesize that an increase in the amount of game elements added included in a gamification implementation will increase the extent of autonomy satisfaction.
When the perception of choice expands, so does the comprehended frame of interaction. I would argue that this is one of the most important next steps in trying to decipher the motivational potency of gamification. Where as my findings show a non-existent presence of autonomy satisfaction in independent game elements, I argue that there is reason to believe that autonomy support will be increased as perceived options of choice increase. Suggestion for future research:

Survey engagement levels at two separate points of a gamification implementation, with one point including less game elements and one point including more. This hypothesis could be tested as an additional step in conjunction with the second hypothesis of surveying attitudes of different demographics.

Fifth, I hypothesize that the engagement effects of a gamification implementation will be subject to the initiative’s time span and the game elements used. Although not explicitly explored and delineated in this thesis, there are several game elements that have inherent characteristics of external rewards. Since SDT shows that external rewards always undermine intrinsic motivation (Deci, 1971; Lepper, Greene & Nisbett 1973), I believe that there is strong reason to look into the effect of external rewards on the objectives of projects of different time spans. I argue there is reason to believe that initiatives that have long-term objectives would do better with facilitating intrinsic motivation, focusing on for instance Feedback, few Constraints and high facilitation of relatedness through elements such as Cooperation, Teams and Social Graphs. For initiatives with a shorter, set, time span and clear objectives, external rewards might be beneficial for successful implementations as they help delineating the path that need to be taken. I suggest the following approach to test this hypothesis:

Conduct longitudinal research on the effects on engagement by implementation of single game elements.

Sixth, I hypothesize that the motivational potency of gamifications might vary dependent on whether it is applied in a context of consumer engagement or employee engagement. Social constructionist theory posits that reality is subjective and open to different interpretations depending on the subject’s prior experiences and preconceptions of the world. I would argue that there is reason to believe that a person’s preconceptions of reality are also shaped by the role he or she inhibits. Essentially,
different reactions will be elicited if the person is affected by a frame from the position of an employee or a consumer. I suggest the following approach for future research:

**Measure the impact of independent game elements on consumer initiatives and employee initiatives. Evaluate whether the effect on engagement differs from one category to the other.**

Despite few years of activity in the gamification industry, it has attracted considerable attention and has, judging by all conceivable growth measurements, been immensely successful as a movement. As of writing, more than two years has passed since Gartner’s predictions of gamification failure rates and as 2015 has passed by a third soon final evaluations of these predictions can be made. Regardless of outcome – I believe that the discussion will still rage on and so will the continuous exploration of the intrinsicalities and boundaries of these initiatives. Apart from the perspective suggested above, there are several others avenues of research relating to user-centricity and specific game elements that need to be researched (Seaborn & Fels, 2015). There are still a plethora of unexplored angles on the subject and with this thesis, I hope to have better delineated the individual trees from the forest, to paraphrase Stebbins (2001) commentary on the abductive approach to research. It does seem like it is possible to leverage the motivational pull of video games in other, alternative contexts. It is just not quite as simple as first suggested as one would imagine it should be considering the complexity of the human mind.

Concluding, while some might view gamification as the end-all-solution to employee disengagement, some as just another marketing gimmick, its introductory phase is passing. Results will speak for themselves and as there are no indications of a slowdown in industry growth, expectations to implement gamification initiatives will rise. Addressing the problem statement of the rates of gamification failures, reasonable advice to organizations looking to catch on to the hype would be: tread with care.
7. References


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