



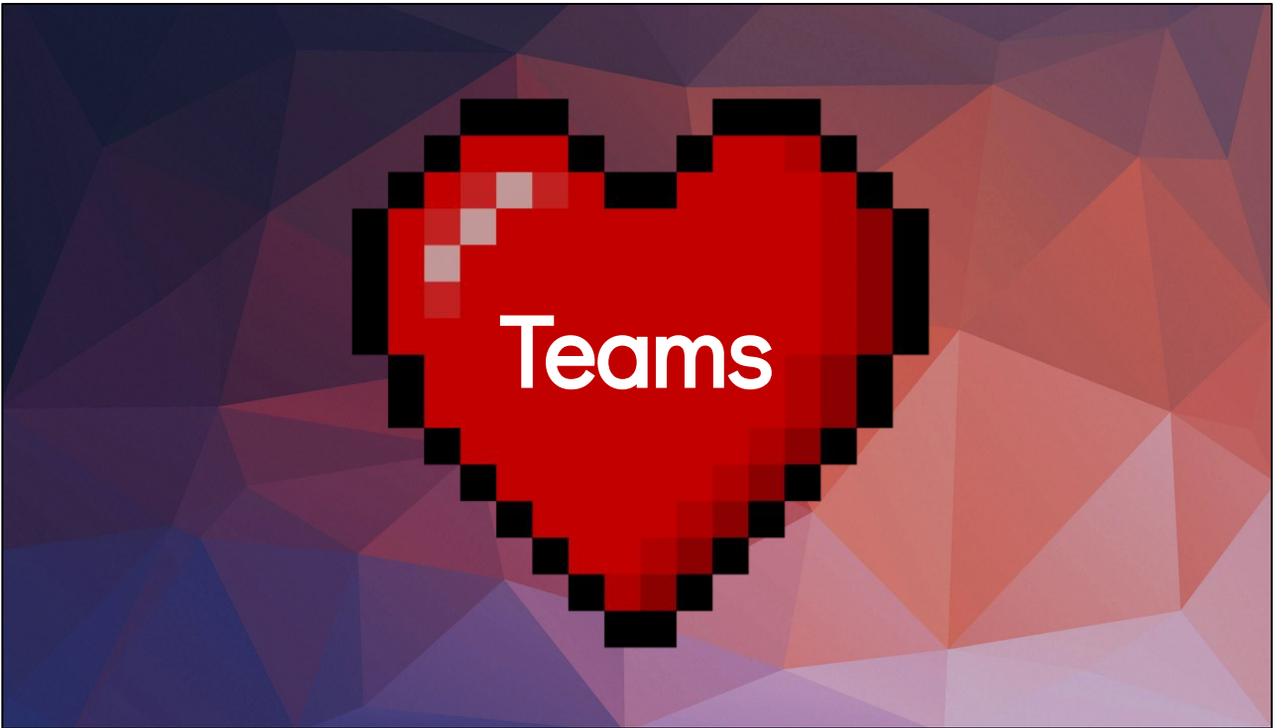
Have you ever found yourself doing something for an hour and that hour felt like five minutes? Or maybe you found yourself doing something for 5 minutes that felt like an hour...

It's fascinating how our motivation to do something can have an impact on how we feel, isn't it.

I was curious about what was actually happening there and a few years ago I started reading books, articles and the scientific literature about human motivation.

What I learned has completely changed the way I think about motivation today.

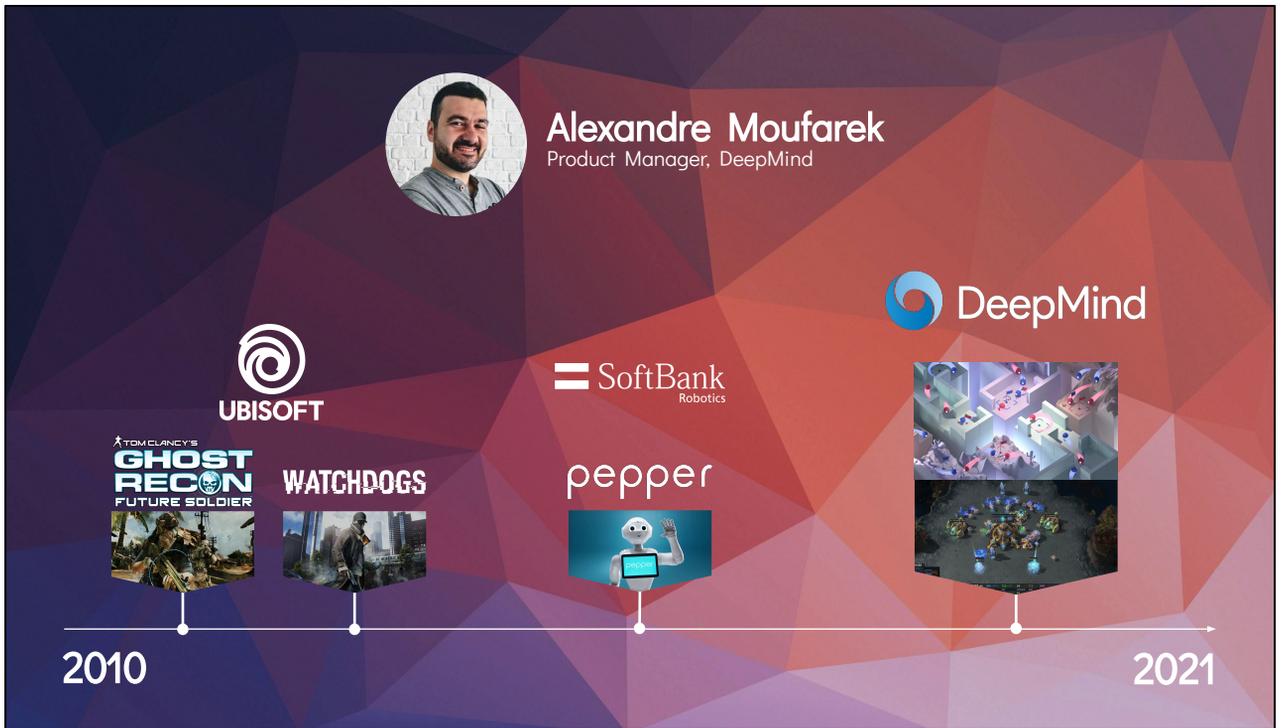
Both in terms of my own and the motivation of my teams.



I **LOVE** teams.

Teams are the best.

A delicate ensemble of artists, testers, engineers, producers, designers pulling their talents, passion and energy together and putting aside their differences, in the service of something bigger than themselves.



Teams are the best and for the last 10 years...

<animation>  
producing AAA Games...

<animation>  
creating interactive experience in consumer robotics...

<animation>  
and using video games for AI Research, I've been passionate about understanding what makes the best teams.



# Prologue

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## MOTIVATION

Today, I'd like to talk about something I find **absolutely fascinating...**

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Motivation: **what drives us to act.**

# How do you **motivate** a team?

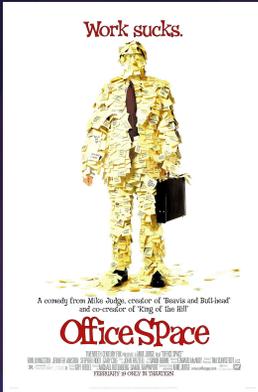
Early in my career I asked myself this simple question: How do you motivate a team?

What do I need to do in order to motivate my team?  
I wondered how most companies did this.

There's a comedy I like very much that did a great satire of life in a corporate environment called "Office Space".  
Show of hands, who has seen "Office Space" ?

One scene in particular, is a great illustration of a typical motivation model most companies use. Let's have a look:

Prologue  
Motivation



CREDITS:

TM & © Fox (1999)

Courtesy of Twentieth Century Fox Film Corporation

Cast: Ron Livingston, John C. McGinley, Paul Willson

Director: Mike Judge

Producers: Daniel Rappaport, Guy Riedel, Michael Rotenberg, Mike Judge

Screenwriter: Mike Judge



There you have it, this is how most corporate environments work:

If you want to motivate people to work, give them reward: salary, bonuses. Maybe an equity sharing program even.

And remind them that if they don't perform they might lose their job.

<animation>

...which would imply there is some kind of correlation between reward or threat and performance.

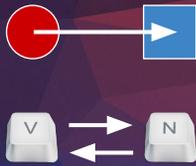
The bigger the reward or threat, the better the performance.

<animation>

...but is that all there is to it?

And does this really work in our line of work or will it only get you to do the minimum to avoid getting fired.

# Algorithmic Tasks



I came across this experiment by Dan Ariely, a professor of behavioral economics and psychology, who gave MIT students a series of tasks and measured their performance.

He started with Algorithmic tasks. These are tasks that only require **mechanical skill**. Completing them can be done by simply following a series of instructions.

<animation>

Tasks like dragging and dropping a circle into a square on a computer screen...

<animation>

...or alternating between V and N keys. These are examples of Algorithmic tasks.

In this context, performance is the number of times participants completed these sorts of tasks in 2 minutes.

He divided his students in different groups.

<animation>

One group received a small financial reward...

<animation>

...another group received a bigger financial reward and performed better.

<animation>

...and another group received an even larger financial reward and performed even better. Showing that reward positively correlates with performance.

So can you guess who performed the best?

<animation>

That's right, the group that did NOT get paid.

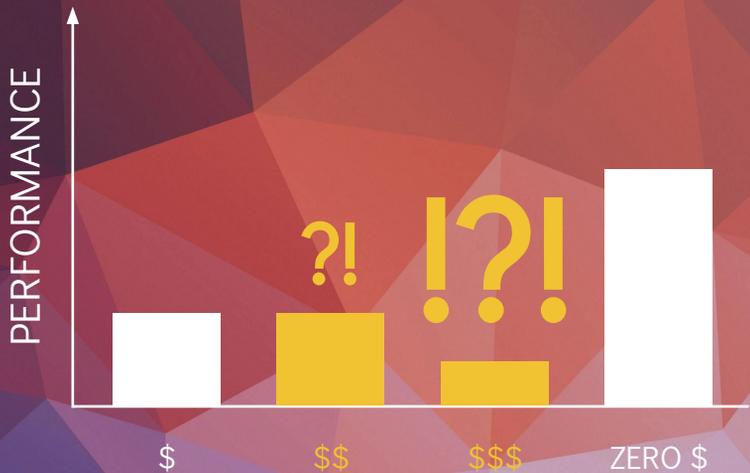
Prologue  
Motivation



I know, I did not expect that either but wait there's more.

# Heuristic Tasks

Example		
3.91	0.82	3.75
1.11	1.69	7.94
3.28	2.52	6.25
9.81	6.09	2.46



He also did this experiment with Heuristic Tasks: these tasks require **Cognitive skills**. They require Problem-Solving, Creative-Thinking and sometimes trying something new in order to complete the task.

<animation>

An example of this is task where the participants were asked to find 2 numbers in a matrix that added up to 10.

He gave the participants 3 different incentives and this time...

<animation>

...the group that received a medium financial reward did **no better than the one that received a small financial reward...**

And the group that received a large financial reward...

<animation>

**...did worst of all.**

<animation>

Then again the group that performed the best wasn't paid.

Prologue  
Motivation



Now wait a second that doesn't make any sense right? A higher reward led to **POORER** performance?!

How can this be!!?? What's happening here?

# Intrinsically Motivated Teams

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THE SCIENCE OF MOTIVATION

That's what I wanted to understand and what this talk is about.

So welcome!

And thanks for attending this talk on “Intrinsically Motivated Teams: Applying Self-Determination Theory”

# AGENDA

Chapter One

**An introduction to Self-Determination Theory**

Chapter Two & Chapter Three

**Forms of motivation and their impact**

Chapter Four

**How to apply this with your team**

Here's what we are going to talk about

Chapter One: An introduction to one of the most robust and supported theories of human motivation: Self-Determination Theory

Chapter Two and Three; We'll look at the different types of motivation and their impact and performance and well-being

Chapter Four: I'll give examples of things you can try with your teams and apply Self-Determination Theory

# ANTI-AGENDA

Chapter One

A methodology of Self-Determination Theory

Chapter Two & Chapter Three

Things that are only true in very specific cases

Chapter Four

How to apply this without a manual

And here what this talk is not about...

# Chapter One

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## SELF-DETERMINA...WHAAAA?

Chapter One

<animation>

Self-Determina...whaaaa?

# Self-Determination Theory

Richard M. Ryan & Edward L. Deci, 2000

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## Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being

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Richard M. Ryan and Edward L. Deci  
*University of Rochester*

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*Human beings can be proactive and engaged or, alternatively, passive and alienated, largely as a function of the social conditions in which they develop and function. Accordingly, research guided by self-determination theory has focused on the social-contextual conditions that facilitate versus forestall the natural processes of self-motivation and healthy psychological development. Specifically, factors have been examined that enhance versus undermine intrinsic motivation, self-regulation, and well-being. The findings have led to the postulate of three innate psychological needs—competence, autonomy, and relatedness—*

*that is worthy of our most intense scientific investigation. Specifically, social contexts catalyze both within- and between-person differences in motivation and personal growth, resulting in people being more self-motivated, energized, and integrated in some situations, domains, and cultures than in others. Research on the conditions that foster versus undermine positive human potentials has both theoretical import and practical significance because it can contribute not only to formal knowledge of the causes of human behavior but also to the design of social environments that optimize people's development, performance,*

Self-Determination Theory (SDT for short) is a macro theory of human motivation and is the work of american psychologists Richard Ryan & Edward Deci.

In 2000, they published this paper titled Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development and Well-Being that I highly recommend everyone to read.

Show of hands: who has heard of Self-Determination Theory?

Chapter One  
Self-Determina...whaaaa?

Daniel Pink (2009); Scott Rigby et al. (2006; 2010)

The screenshot shows a TED talk video player. The video title is "The puzzle of motivation" by Dan Pink. A large white box is overlaid on the video, containing the text: "Daniel H. Pink", "author of the New York Times bestseller A Whole New Mind", "DRIVE", and "The Surprising Truth About What Motivates Us". The video player interface includes a progress bar at 18:23, a share button, and a download button. Below the video, there are tabs for "Details", "Transcript", and "Reading List". The "Details" tab is active, showing the video's description, a "Career analyst Dan Pink examines the puzzle most managers don't: Traditional rewards are and maybe, a way forward." and a view count of 24,741,373. The "ABOUT THE SPEAKER" section identifies Dan Pink as a "Career analyst" and mentions his role as Al Gore's speechwriter.

The screenshot shows a GDC session titled "Intrinsic & Extrinsic Player Motivation: Implications for Design and Player Retention". The session is presented by Scott Rigby and others. The main content is a slide titled "The Motivational Pull of Video Games: A Self-Determination Theory Approach" by Richard H. Ryan, C. Scott Rigby, and Andrew Ferguson. The slide includes an abstract, a keywords section, and a list of references. The abstract discusses the relationship between intrinsic and extrinsic motivation and how they can be applied effectively. The keywords section lists "Self-Determination Theory", "Intrinsic Motivation", and "Extrinsic Motivation". The references section lists several academic papers related to the topic.

Maybe you haven't heard of SDT but have seen Dan Pink's Ted Talk the "Puzzle of motivation" or maybe you read his book "Drive"?  
The Research he talks about is Self-Determination Theory.

Or maybe you saw on of Scott Rigby's great GDC talks about Player Motivation and read about the "Player Experience of Need Satisfaction" model.  
This is inspired by Self-Determination Theory.

Extrinsic  
Motivation

Self-Determined

Non Self-Determined

Intrinsic  
Motivation

Or maybe you heard about these terms Intrinsic and Extrinsic Motivation?

SDT has emerged from research on Extrinsic Motivation and Intrinsic Motivation.

Edward Deci was the first psychologist to do experiments on intrinsic motivation with human subjects in 1971.

Back then, most psychologists considered motivation to be a **quantity** (something you have enough off to do something or not enough off to do something).

Deci and Ryan's view was that motivation is actually a **quality**.

<animation>

**A continuum of different quality** of motivation that led to different outcome quality.

And since this talk is not titled "**Ext**rinsically Motivated Teams", you've guessed it, Intrinsic Motivation leads to a better outcomes.



On the left of this continuum is “Amotivation” then Extrinsic and Intrinsic Motivation.

Amotivation is impersonal. You are simply not willing to do something.

There are different types of Extrinsic Motivation:

External source of extrinsic motivation: it comes from someone else. You feel pressured to do something by external factors in order to get a reward or avoid a punishment. You are pressured and you do something, because you have to do it.

Somewhat external source of motivation: this is pressure you put on yourself to avoid feeling guilty. Like staying late because you fear what people would think about you if you left work early.

Somewhat internal - you don't particularly enjoy doing it but you know it's the right thing to do - like skipping dessert because you're on a diet.

Internal source of motivation. This is about doing something that is consistent with your life goals. Like getting paid to go to work. It's an extrinsic motivation - you'd probably stop going if you're not getting paid - but you feel ok with it because it allows you to pay for rent and provide for your family.

Finally there's Intrinsic motivation. It's an internal source of motivation which is about doing something because you enjoy do it.

The 3 on the left are referred to as Controlled Motivation - our motivation to act is under external influences - and the 3 on the right are referred to as Autonomous motivation - doing things you want to.

# BASIC PSYCHOLOGICAL NEEDS

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Competence  
Autonomy  
Relatedness

To facilitate autonomous motivation and hopefully **intrinsic** motivation, SDT postulates that 3 basic psychological needs need to be satisfied.

These are our need for :

<animation>Competence...<animation>...Autonomy...<animation>... and Relatedness.

# COMPETENCE

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Seek to control the outcome and  
experience **mastery**.

Competence: our need to seek to control the outcome and experience mastery.

This is our need for novelty, challenge and getting better at something we find important.

# AUTONOMY

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Be **causal agents** of one's own life and **act in harmony** with one's integrated self.

Autonomy is the need to be causal agents of one's own life - this is to be able to choose how we go about doing things and have meaningful choices - and act in harmony with one's integrated self - which means to perform actions we'd happily endorse. Do things that align with our personal values and beliefs.

Here Autonomy does NOT mean Independence. This is about having autonomy within a wider group.

Which leads us to the 3rd basic psychological need....

# RELATEDNESS

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To interact, be connected to, and experience caring for **others**.

Relatedness: our need to interact, be connected to and experience caring for others. This is being part of a family, a community, a team of people who care for you and who you care for. And together you have a shared purpose.

BASIC PSYCHOLOGICAL NEEDS  
**COMPETENCE . AUTONOMY . RELATEDNESS**

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# Innate Universal

They are believed to be....

<animation>

...Innate - something we are born with not something we learn - and they have been shown to be....

<animation>

...Universal, true for all humans. Hands up - who has humans on their team? Good, so all the human on your team have these psychological needs then.

For more than 30 years, hundreds of researchers did hundreds of experiments all over the world to confirm that this is in fact true regardless of Age, Gender, Race, Culture, Religion etc...So this is very well supported.

## BASIC PSYCHOLOGICAL NEEDS

# COMPETENCE . AUTONOMY . RELATEDNESS

# Passion isn't one.

Something I found particularly interesting when I first read about this was actually something that wasn't on the list.

I always found that I particularly enjoyed doing things I was passionate about. So I expected "Passion" to be a basic psychological need.

<animation>

Turns out **Passion** isn't one.

What this means is you can enjoy doing something your not passionate about. Like playing an instrument, have a good time, get better at it etc. without necessarily being in love with that activity.

It also means that you can be deeply passionate about making games - but if you are not learning anything new, have no choice about how you do what you do and don't see how your work is contributing to anything meaningful - you can get disengaged.

And if someone tells you "that's because you're not passionate about games enough" well SDT shows that they are wrong and that the working environment they may have contributed to creating could be improved.

# Chapter One Takeaways

Prologue

Chapter One  
Self-Determina...whaaaaa?

Chapter Two  
Controlled Motivation

Chapter Three  
Autonomous Motivation

Chapter Four  
Need-Supportive Environment

Epilogue

- Self-Determination Theory is a **macro theory of human motivation**
- Continuum of different **quality** of motivation
- **Autonomous motivation** is facilitated when 3 **innate, universal basic psychological needs** are satisfied:
  - Competence
  - Autonomy
  - Relatedness

Let's recap this chapter.

# Chapter Two

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## CONTROLLED MOTIVATION

Let's look a bit closer at the different types of motivation in Chapter Two!

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“Controlled Motivation”.

← Low-quality form of motivation → High-quality form of motivation →

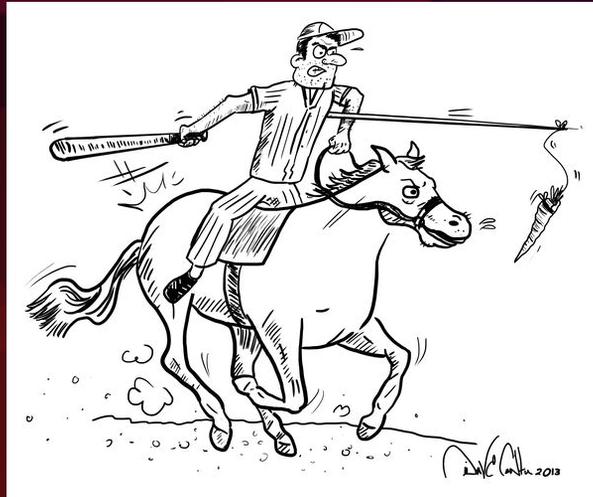
Motivation	Amotivation	Extrinsic motivation			Intrinsic motivation	
Source	Impersonal	External	Somewhat external	Somewhat internal	Internal	Internal
Action	"Not doing it."	"I have to do it."	"I would feel guilty if I didn't do it."	"I believe it's the right thing to do."	"It's consistent with my life goals."	"I enjoy doing it."

Controlled motivation

This refers to situations where our motivation to act is under external influences. And I want to focus on **Controlled motivation** which has a If...then structure attached to positive or negative rewards.

If you do this, then you will get a promotion.  
If you don't do that, then you will lose your job.

Chapter Two  
Controlled Motivation



The carrots and the sticks model of motivation.

This is a very powerful model of motivation and something that is applied in many companies.

So much so, that the TV Show “The Office” has an episode called “The Incentive”.  
Let’s have a look:

## Chapter Two Controlled Motivation



That escalated quickly...

Typical situation in lots of companies:

Your manager's manager assigns a target number to reach - games sells, metacritic score - and that if the expected performance is delivered your manager will get a bonus or a promotion. But if not, they would get in trouble.

And then that manager replicates that model and does something similar to their teams. What can possibly be wrong with that? Everyone clearly seems motivated to work, excited even.

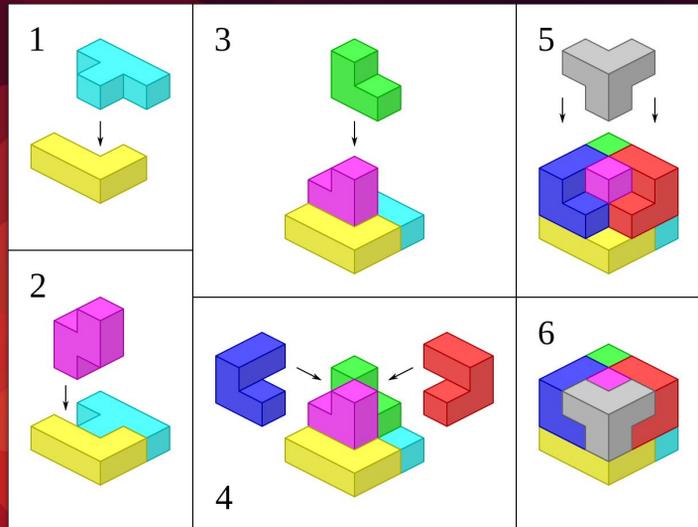
Note however how they haven't really discussed the work much but mostly focused on what they need to do in order to get the rewards.

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The Office US

Watch Season 8 Episode 2 - The Incentive

# Soma Puzzles EXPERIMENTS



To study the impact of extrinsic motivation in the form of financial rewards on performance, Edward Deci did a series of experiments in 1971 with Soma Puzzles.

Since then these results have been reproduced over and over again, all around the world, with all sorts of people, in all sorts of industries. So it's very well supported and **one of the most robust findings in social science.**

If SDT were a superhero, this would be its origin story.

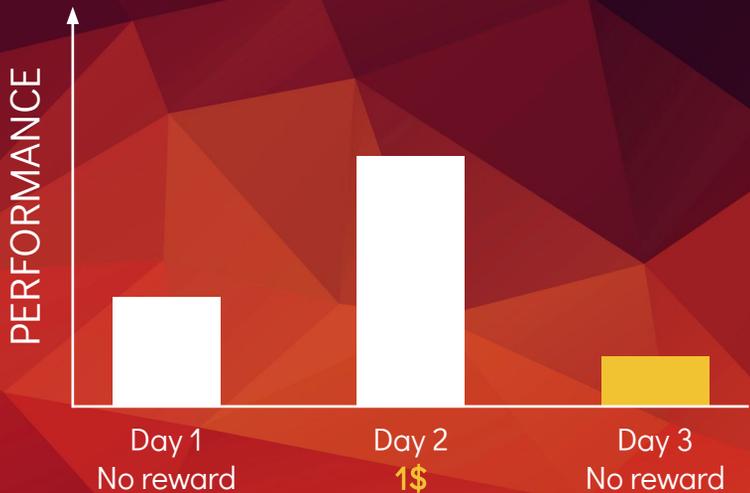
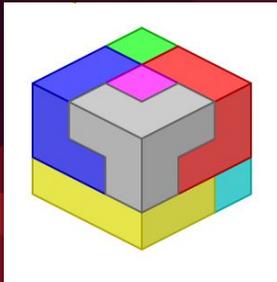


Edward Deci gave his psychology students a set of these 3D tetris-like shapes and timed how long it would take them to build complete cubes.

<animation>

After the participants had solved 2 puzzles, he would stop the experiment, step out of the room pretexting he needs to look at the data in order to decide what puzzle they should do next.

While he was away participants were left in the room with puzzles they could try to solve, a coffee machine, a Times, a New Yorker, a Playboy magazine and an ashtray serving as scientific proof that this was indeed, the 70s.



During this free-choice period, the researchers were actually observing what the participants were doing through a one-way mirror.

They measured how long participants would keep working on the puzzles even though the experiment had stopped and used that as a proxy for intrinsic motivation.

They divided the participants in 2 groups and repeated this experiment on 3 different days. Group A would get no reward on either of the 3 days, while Group B would...

<animation>

...receive no reward on Day 1...

<animation>

...1\$ for each puzzle solved on Day 2 (which is about 7\$ today)...

<animation>

...and then no reward again on Day 3, pretexting the budget they had for this experiment had been completely spent.

<animation>

On day 1, the participants spent less time working on the puzzles during the

free-choice period than...

<animation>

...on Day 2 when they received 1\$ per solved puzzle.

What do you think happened on day 3 when they were told they would not get paid anymore?

<animation>

Their intrinsic motivation went down of course.

Not only did it go down, it went **below** the Day 1 results even though at the end of each day, all participants reported having enjoyed solving these puzzles and yet the introduction of a financial reward had undermined their intrinsic motivation.

Chapter Two  
Controlled Motivation



There is a lot to unpack here to understand what actually happened.

# Reward over Task

Expected with task

Lose interest in task

Decreasing perceived value

The 30 years of research that followed this experiment enabled researchers to explain what was at play here:

When an extrinsic reward such as money is introduced, individuals re-evaluate the importance of the task and value the reward over the task.

<animation>

The reward becomes expected for performing the task and as we've seen, produces only short term gain. When the reward stops...

<animation>

...we tend to lose interest in the task. So you would need to continue giving the reward to keep the same level of performance.

But let's assume you have infinite resources and can continue to give the reward forever.

<animation>

The bad news here is that over time it's perceived value goes down. Getting that reward becomes the norm and does not deliver the boost in performance you'd expect.

# Path of least Resistance

Repeatable actions  
Less risk, less innovation  
Unethical behaviour

The other thing that happens with extrinsic motivation is people tend to choose the path of least resistance.

<animation>

Seeking repeatable actions: doing things that have produced rewards in the past such as working overtime or creating more change lists regardless of the value it actually adds to the game, if this sort of behavior led to bigger bonuses in the past. Because we tend to look for things that worked in the past, we also tend to...

<animation>

..take less risks, innovating less as a result. When asked to target a revenue level or a metacritic score, we can either create something new and amazing (which is hard) or look at what the current trend is, what sells and try to reproduce that instead (which is much easier)

Like creating another battle royale mode maybe?

<animation>

Extrinsic motivation can also lead to unethical behavior. As it doesn't come from you it doesn't have to align with your personal values and beliefs. A manager aiming to get a bonus or fearing to miss out on a promotion if the game doesn't ship on time for Xmas might be ready to have the team work late and on weekends for months even

though that manager hates crunch and would rather everyone have time with their families and friends.

When blamed for such behavior what do people say? "It's wasn't me, I was under a lot of pressure from management, the market": from external influences.

# Context is everything

Algorithmic tasks

Non-contingent rewards

Promotes basic needs

So does it mean that rewarding people for their work is a bad thing?  
No of course not but context is everything.

<animation>

If the task is algorithmic, mechanical, then it works great. Maybe the task is boring and people would not be intrinsically motivated to do it in the first place so there is no intrinsic motivation to undermine anyway.  
But even then, you might be able to frame it in the service of a meaningful goal.

<animation>

One important thing is to have the reward not be contingent on completing the task or even better be a good surprise, something that wasn't expected. Experiments have shown that in this context the financial reward doesn't undermine intrinsic motivation.

<animation>

Same goes for rewards that promote basic needs. Rewarding someone for actively working with everyone on the team and promoting collaboration - which already satisfies the need for Relatedness - will have a positive effect on intrinsic motivation.

# Undermines intrinsic motivation

**Threats & negative feedback** (Deci & Casio 1972)

**Deadlines** (Amabile et al. 1976)

**Competition** (Deci 1981)

**Evaluation** (Shelley & Perry-Smith 2001)

The scientific literature is filled with examples of common motivators that undermine intrinsic motivation when used under the wrong circumstances.

# Undermines intrinsic motivation

Threats & negative feedback (Deci & Casio 1972)

**Deadlines** (Amabile et al. 1976)

Competition (Deci 1981)

Evaluation (Shelley & Perry-Smith 2001)

Take **Deadlines** for instance. Have you ever heard someone say “without deadlines, we don’t get anything done”.

Why is that? Is the team focused on the fear of missing the deadline over creating a good game?

Then deadlines are a short term solution and yes, you need to keep setting deadlines to achieve the same level of performance. But if we have them too often then after a while people don't care about deadlines anymore.

Some people might ask if “It’s a hard deadline” for instance or consider that deadlines are useless “We never meet them anyway”.

Controlled motivation can lead to  
**poorer**  
performance.

Almost 30 years of academic studies, both in the lab and in the field were summarised in a meta-analysis published in 1999 by Edward Deci show that extrinsic motivation, controlled types of Motivation:

can lead to poorer performance....

In 2000 (1 year later) he would publish a paper with Richard Ryan that will move the research community from trying to prove them wrong to exploring what other effects extrinsic motivation has.

Controlled motivation has a  
**negative**  
impact on well-being.

It turns out that extrinsic motivation also has a negative impact on well-being.

People working in the pursuit of money, a promotion, power or the fear of losing their job report more signs of anxiety, depression and physical pain such as wrist, neck and back pain, all symptoms associated with stress. All because they act under the pressure of an external influence.

# Chapter Two Takeaways

Prologue

Chapter One  
Self-Determina...whaaaa?

**Chapter Two**  
Controlled Motivation

Chapter Three  
Autonomous Motivation

Chapter Four  
Need-Supportive Environment

Epilogue

- **Controlled** type of motivation: **external** source
- **Short term** positive effects
- **Negative effect** on performance & well-being...
- ...unless the rewards are **not contingent** on the task

Let's recap Chapter 2

# Chapter Three

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## AUTONOMOUS MOTIVATION

Let's see what's at the other end of the continuum of motivation in Chapter Three:

<animation>

...Autonomous Motivation.

← Low-quality form of motivation

High-quality form of motivation →

Motivation	Amotivation	Extrinsic motivation			Intrinsic motivation	
Source	Impersonal	External	Somewhat external	Somewhat internal	Internal	
Action	"Not doing it."	"I have to do it."	"I would feel guilty if I didn't do it."	"I believe it's the right thing to do."	"It's consistent with my life goals."	"I enjoy doing it."

Autonomous motivation

Intrinsic motivation is an autonomous motivation: doing something you want to or better yet, doing something simply because you enjoy it. That's intrinsic motivation.

Chapter Three  
Autonomous Motivation



It's best illustrated by children at play.

You don't need to motivate a child to play. They are naturally driven to.

Intrinsic motivation is what explains why a child could spend hours in the park building a bike shed with wooden sticks.

This is my son by the way, wearing a man-bun like a boss.

Intrinsic motivation can also explain certain irrational behaviors such as...

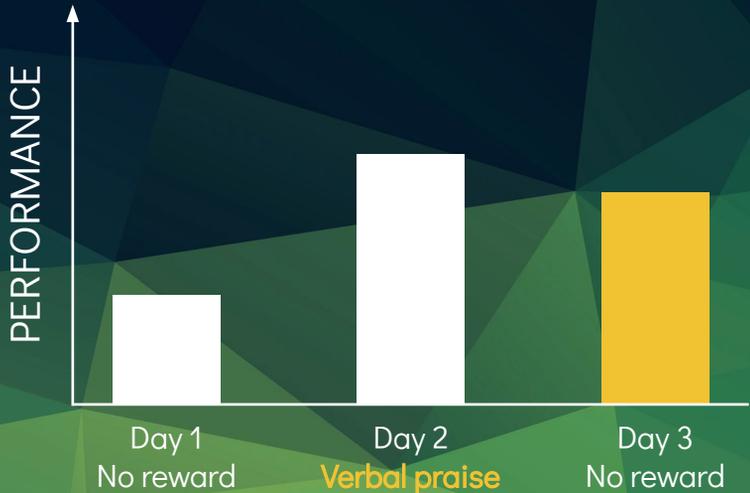
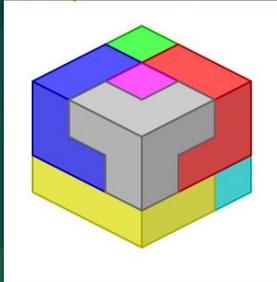
Chapter Three  
Autonomous Motivation



...for example.

Why would anyone go up a hill, with a sleeping 3 year old on their shoulders while carrying their bike and pushing their baby sister sleeping in the stroller, without getting paid?!

Makes no sense right? Well that's the power of the intrinsic motivation for you, the drive to not let your kids die of cold in a bike shed made of wooden sticks.



Let's look at another experiment Edward Deci did in 1971:  
It's very similar to the previous only this time...

<animation>

..Only this time on day 2, every time participants would complete a puzzle they would get a verbal praise instead of a financial reward. (eg. "Well done, this is the best time anyone did today on that one.")

<animation>

Then again no reward on Day 3.

<animation>

On Day 1 and Day 2: same as before...

<animation>

...then on Day 3, even though participants spent less time working on the puzzle during the free-time period, they did so for much longer than on Day 1.

The verbal praise had increased their intrinsic motivation even after they were not getting it anymore where the financial reward had the opposite effect and had only

short term positive impact on performance.



Here's another study from Dan Ariely: He gave MIT students sheets of paper with a sequence random letters.

<animation>

They were asked to find a series of letters for a small amount of money.

<animation>

...and to give them back to the researchers in order to get paid.

Everytime a sheet of paper was handed back to the researchers, they would do one of 3 things:

<animation>

Acknowledge it: say "Aha!" and put on the pile.

<animation>

Ignore it: just put on the pile without saying anything.

<animation>

Or instantly shred it in front of their eyes as they lost faith in humanity.

<animation>

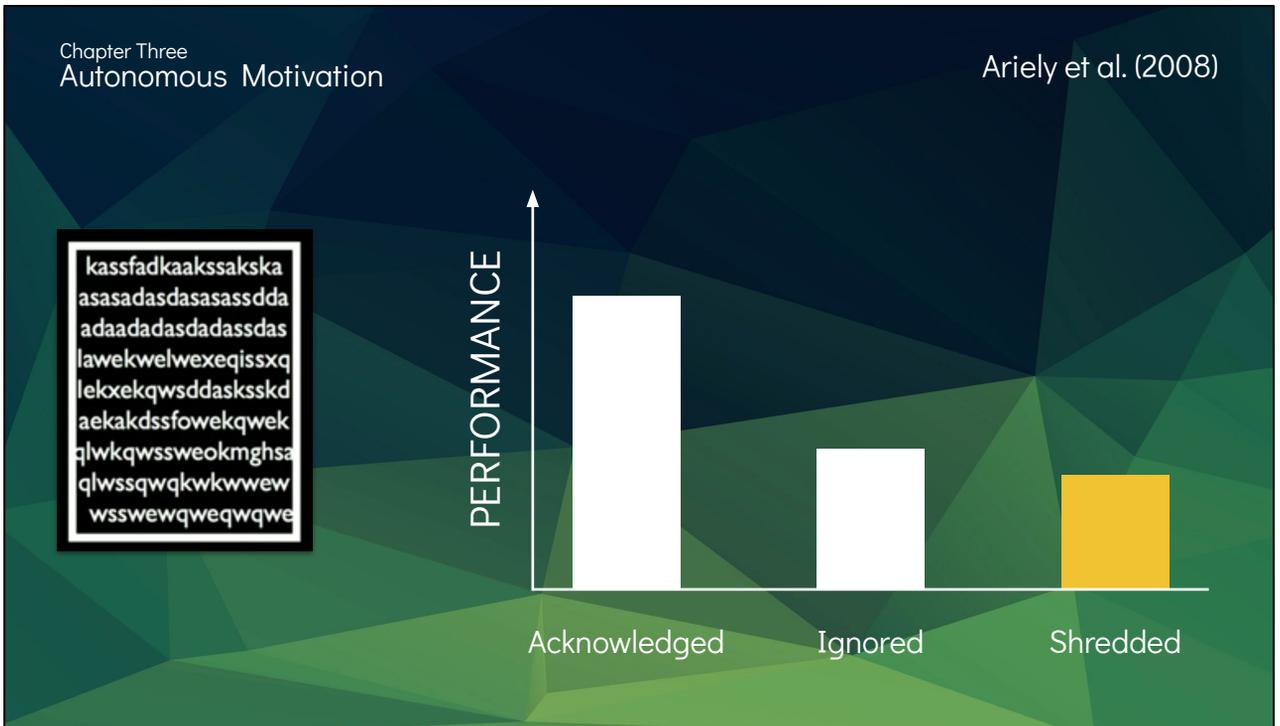
And then, they would ask the participants if they wanted to do another sheet of paper for less money.

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Icon credits

Person by Alice Design from the Noun Project

Scientist by Andrew Doane from the Noun Project



So in this context, performance is how many sheets of paper the participants were willing to do even though the pay was going down.

In terms of performance:

<animation>

When work was acknowledged performance was good.

<animation>

When ignored the performance was much worse.

<animation>

And when the sheets were shredded, the performance was almost as bad as when it was ignored. Why does that mean?

Imagine a team has worked very hard on a game and it gets canceled (eg. shredded). The team is going to be devastated, right?

Well it turns out that if the team has shipped the game and you don't properly take the time to acknowledge all the work that went into it, this could potentially have the same negative impact on intrinsic motivation that canceling it would have had.

Autonomous motivation can lead to  
**better**  
performance.

Going back to the meta-analysis published by Edward Deci in 1999: intrinsic motivation can lead to...

<animation>

...better performance.

A better and sustainable level of performance.

Autonomous motivation leads to  
**less burnout,**  
lower turnover rates.

People intrinsically motivated in what they do at work and in life in general show less signs of physical and mental distress which in turn leads to

<animation>

less burnout and

<animation>

lower turnover rates.

Ok so what are we saying here?

Don't pay people and they will perform better and be happier and live healthier lives?!

Not exactly so...

Chapter Three  
Autonomous Motivation



Let's take a step back here and talk about money for a second.

# Take the money issue off the table.

For the benefits of intrinsic motivation to kick in you need to take the money issue...

<animation>

...off the table. How do you do that? By paying people enough and fairly! Otherwise their focus is the fear of being kicked out of their flats because they can't afford rent or on how much Bob over there is getting paid 20% more for the same job and same level of performance.

Research of equity (eg. fairness) of pay in the workplace shows that it's paramount if you want people on your team to be creative and productive.

# Chapter Three Takeaways

Prologue

Chapter One  
Self-Determina...whaaaa?

Chapter Two  
Controlled Motivation

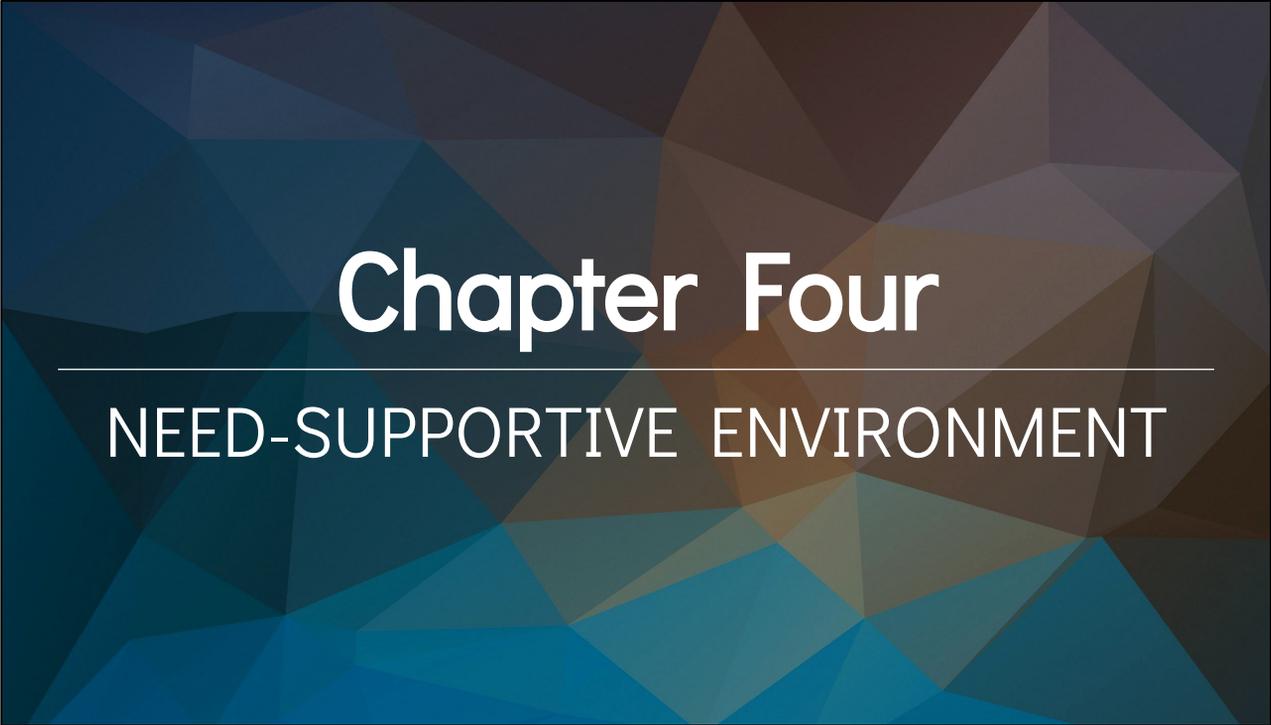
**Chapter Three**  
Autonomous Motivation

Chapter Four  
Need-Supportive Environment

Epilogue

- **Autonomous** type of motivation: **internal** source
- **Sustainable positive effect** on performance & well-being
- Enabled when **basic psychological needs are satisfied**
- Only in the context of **equitable pay**

Now let's recap Chapter 3.



# Chapter Four

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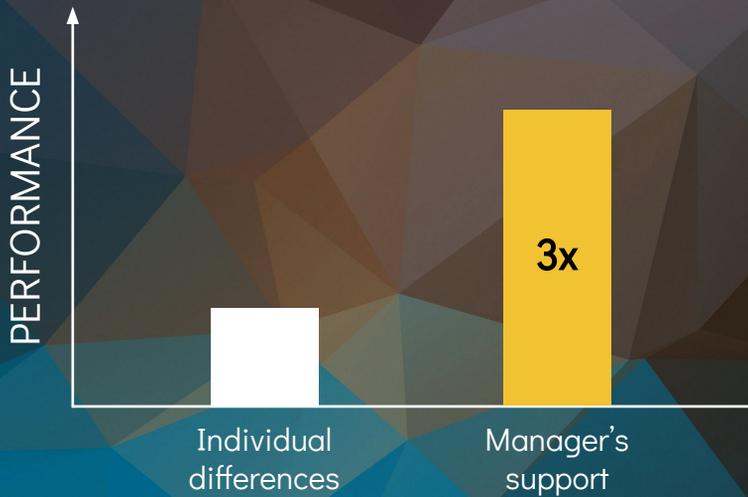
## NEED-SUPPORTIVE ENVIRONMENT

Everyone on a team can contribute to creating an environment that facilitates intrinsic motivation.

Chapter Four: Need-supportive environment.

A need-supportive environment satisfies  
**basic psychological needs** and promotes  
**autonomous motivation.**

A need-supportive environment satisfies **basic psychological needs** and promotes **autonomous motivation.**



This is particularly important for any manager, let me tell you why:

When setting up a team what do you do?

You try to hire the best people, right? Competent, autonomous, mission-driven people. Best way to build a motivated team.

<animation>

And individual differences do play a part in this, no doubt about it.

<animation>

But how much of an impact do those individual differences play compared to...

<animation>

...the manager role in creating an need-supportive environment?

Baard, Deci and Ryan did experiments of this in 2004 and found that the manager's impact on needs satisfaction is...

<animation>

...3 times bigger than the individual differences of the people on the team.

Talk about “Hire the best people and get out of their way.” ?

Well be careful, people don't really leave companies. They usually leave bad managers.

Take a sports team: get the best players and give them an uninspiring control-freak for a coach and have them play against a team of average players with an inspiring, trusting and supportive coach. Who do you think would perform best?

Sure the best players might be able to pull off a few miracles because of their individual qualities but in the long run, the average players will perform better.

Same goes for any team.

So what can you do to create a need-supportive environment?

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Picture credit

<a href="https://www.freepik.com/free-photos-vectors/business">Business photo created by jcomp - www.freepik.com</a>

Available on

 GDCVault

 YouTube

# GDC Applying Self Determination Theory



# COMPETENCE

- Systematically **acknowledge** work done
- Provide **specific, personal** feedback
- People **are not** their ideas
- **Training, training** and **training**

In terms of supporting competence:

<animation>

First, always make time to acknowledge work done. When you don't, remember it feels like shredding someone's work.

<animation>

When giving feedback, be specific and personal.

"Good job team" has been shown to have little effect on motivation. When praising someone's work, say precisely what you are praising them for to maximize the impact.

<animation>

When giving feedback remember that people are not their ideas and choose your words careful to feedback on the ideas or the behaviour rather that on the person.

Finally, 3 things have been shown to promote competence and its...

<animation>

...training, training and training. Yes it takes effort, time, money.

You might be thinking:

"But what if we invest all this in training our people and they leave!?!"

Instead, consider what would happen if you don't train them and they stay...

# AUTONOMY

- Value the **team's perspective**
- Provide **meaningful choices**
- Leave execution strategy **open**
- Support **exploration**

To support autonomy:

<animation>

Value the team's perspective. Show empathy and acknowledge when something is hard or boring.

That may seem obvious but this will allow you to...

<animation>

...provide meaningful choices. Not just the choices you think of. Understand what sort of things people would prefer to work on and create these opportunities when you can.

When starting a project, rather than saying "Here's what we need to do and how we should do it." and then asking "WDYT?"...

<animation>

Instead leave the execution strategy open. Give the team autonomy to explore ways of achieving the goal. Not by simply letting everyone do what they want but by...

<animation>

...actively supporting exploration. Enable the team to make decisions, delegate, provide guidance when things get blocked and create an environment where trying new things is safe.



- Foster **diversity, equity and inclusion**
- Pay people **enough and fairly**
- Leave **no room for office politics**
- Inspire with a **shared mission**

Relatedness:

You want to create a collaborative environment?

<animation>

Start by paying people enough and fairly.

Fight the temptation of making exceptions when it comes to salary raises or when it comes to hiring someone. Offering them more than what you were planning to might get you that new hire but it will certainly crush the motivation of every one else on the team who didn't get the same treatment.

<animation>

Build a team as diverse as you can. The more diverse a team is, the more different perspectives there are, the more people tend to value other people's opinion and challenge the status quo.

Even if you build a team of people very passionate about making games...

<animation>

...inspire them with a shared vision. Give them a reason to come work every morning besides the paycheck. Don't forget, even passionate people can lose motivation without autonomy and relatedness.

And finally...

<animation>

...leave no room for politics and competition of any kind within a team.

Think about your team gives feedback and how promotion are announced. Is it done in a way that promotes teamwork or internal competition?

You want people who perform well AND live by your team's values.

If they don't perform or they don't live by your teams values then you have an obvious problem to fix.

But when they perform very well but they don't live by your team values and leadership tolerates it ie tolerate brilliant jerks, in effectively undermines the team's need for relatedness.



# Epilogue

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**MOTIVATION**

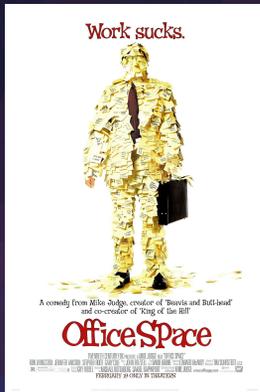
# How do you **motivate** a team?

Going back to our initial question: “How do you motivate a team?”

What have I learned from research on human motivation and Self-Determination Theory?

Turns out Office Space had the answer all along...

Epilogue  
Motivation



CREDITS:

TM & © Fox (1999)

Courtesy of Twentieth Century Fox Film Corporation

Cast: Ron Livingston, John C. McGinley, Paul Willson

Director: Mike Judge

Producers: Daniel Rappaport, Guy Riedel, Michael Rotenberg, Mike Judge

Screenwriter: Mike Judge

Epilogue  
Motivation

How do you **motivate** a team?

Yes, there it is.

I wasn't asking myself the right question...

# What can I do to facilitate my team's intrinsic motivation?

ie. support

**Competence . Autonomy . Relatedness**

Instead what I now ask myself and if you only take one thing away it this:

Ask yourself: “How can I create the conditions under which my team can motivate itself?”

How can I facilitate intrinsic motivation ie support my team need for competence, autonomy and relatedness?

“Happy **game developers**  
make happy **gamers.**”

It's not just a saying.

Because after all what SDT has shown is that:

"Happy **game developers** make happy **gamers.**"

It's not just a saying.



It's science.

GDC

# Intrinsically Motivated Teams

## The Science of Motivation

Alexandre Moufarek  
Product Manager, DeepMind

 @amoufarek

GAME DEVELOPERS CONFERENCE | July 19-23, 2021



# Appendix

# References

## Research Papers

- Ariely, D., Gneezy, U., Loewenstein, G., Mazar, N. (2005). "Large stakes and big mistakes," *Working Papers 05-11*, Federal Reserve Bank of Boston.
- Ariely, D., Kamenica, E., & Prelec, D. (2008). *Man's search for meaning: The case of Legos* *Journal of Economic Behavior & Organization*
- Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Ryan, R. M., Rigby, C. S., & Przybylski, A. K. (2006). The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30, 347-364
- Ryan, R. M., Rigby, C. S., & Przybylski, A. K. (2010). A motivational model of video game engagement.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18, 105-115.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- White, R. W. (1963). *Ego and reality in psychoanalytic theory*. New York: International Universities Press.
- Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. *Human Development*, 1, 661-669.
- deCharms, R. (1968). *Personal causation*. New York: Academic Press.
- Deci, E. L. (1975). *Intrinsic motivation*. New York: Plenum.
- Reis, H. T. (1994). Domains of experience: Investigating relationship processes from three perspectives. In R. Erber & R. Gilmour (Eds.), *Theoretical frameworks for personal relationships* (pp. 87-110). Hillsdale, NJ: Erlbaum.
- Baumeister, R., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84(1), 97-110.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie canadienne*, 49(3), 182-185.
- Deci, E. L. (1972). Intrinsic motivation, extrinsic reinforcement, and inequity. *Journal of Personality and Social Psychology*, 22(1), 113-120.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. A. Dienstbier (Ed.), *Current theory and research in motivation*, Vol. 38. Nebraska Symposium on Motivation, 1990: Perspectives on motivation (pp. 237-288). Lincoln, NE, US: University of Nebraska Press.
- Deci, E. L., & Ryan, R. M. (1995). Human autonomy: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31-49). New York: Plenum Press.
- Ryan, R. (1995). "Psychological needs and the facilitation of integrative processes", *Journal of Personality*, 63 (3): 397-427
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26, 331-362.
- Deci, E. L., Koestner, R., Ryan, R. M. (1999) A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, Vol 125(6), Nov 1999, 627-668
- Deci, E. L., & Ryan, R. M. (2010). *Self-Determination*. New York, NY: John Wiley & Sons, Inc.
- Fernet, C., Austin, S., Trépanier, S.-G., & Dussault, M. (2013). How do job characteristics contribute to burnout? Exploring the distinct mediating roles of perceived autonomy, competence, and relatedness. *European Journal of Work and Organizational Psychology*, 22(2), 123-137.
- Sylvie F. Richer, Celine Blanchard, Robert J. Vallerand (2002). A Motivational Model of Work Turnover. *Journal of Applied Social Psychology* 32(10):2089-2113
- Anja H. Olafsen, Hallgeir Halvari, Jacques Forest, Edward L. Deci. Show them the money? The role of pay, managerial need support, and justice in a self-determination theory model of intrinsic work motivation. *Scandinavian Journal of Psychology*, March 2015, Wiley
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-Being in Two Work Settings. *Journal of Applied Social Psychology*, 34(10), 2045-2068.
- Deci, E. L., & Cascio, W. F. 1972. April. Changes in intrinsic motivation as a function of negative feedback and threats. Presented at the meeting of the Eastern Psychological Association, Boston.
- Amabile, T. M., W. DeJong, and M. R. Lepper. "Effects of Externally-Imposed Deadlines on Subsequent Intrinsic Motivation." *Journal of Personality and Social Psychology* 34, no. 1 (July 1976): 92-98.
- Edward L. Deci, Gregory Betley et al. (1981) When Trying to Win Competition and Intrinsic Motivation.
- Shalley, C. E., & Perry-Smith, J. E. (2001). Effects of social-psychological factors on creative performance: The role of informational and controlling expected evaluation and modeling experience.

## References (cont.)

### Books

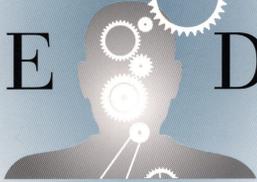
- [\*Start With Why: How Great Leaders Inspire Everyone To Take Action\*](#) by Simon Sinek
- [\*Drive: The Surprising Truth About What Motivates Us\*](#) by Daniel H. Pink
- [\*Predictably Irrational: The Hidden Forces That Shape Our Decisions\*](#) by Dan Ariely
- [\*Why do We do what We do? Understanding Self-Motivation\*](#) by Edward Deci

### Video clips & Gifs

- [\*"Office Space"\*](#), Mike Judge, Twentieth Century Fox
- [\*"The Office"\*](#), Season 8, Episode 2: *The Incentive*
- [\*"The Interview"\*](#), Evan Goldberg, Seth Rogen, Columbia Pictures

"Edward L. Deci is one of the most incisive, insightful  
and important thinkers in psychology today."  
—DANIEL GOLEMAN, AUTHOR OF *EMOTIONAL INTELLIGENCE*

# WHY WE DO WHAT WE DO



*Understanding Self-Motivation*

EDWARD L. DECI

WITH RICHARD FLASTE



If you reward your children for doing their homework, they will usually respond by getting it done. But is this the most effective method of motivation?

No, says psychologist Edward L. Deci, who challenges traditional thinking and shows that this method actually works against performance.

The best way to motivate people--at school, at work, or at home--is to support their sense of autonomy. Explaining the reasons why a task is important and then allowing as much personal freedom as possible in carrying out the task will stimulate interest and commitment, and is a much more effective approach than the standard system of reward and punishment.