Warning, this is one of my longest blogs ever!

Now we know a bit about what games, gamification and game-based solutions are (and are not), it's time to start to consider some of the non-game related topics you need to understand to be good at building game-based solutions. The first of these is motivation.

In gamification we tend to look at motivation in varying depths, starting from a very simple perspective with just two options. Intrinsic motivation or extrinsic motivation.

The most basic way to look at this is that activities that are intrinsically motivating are those that people will do because they want to or appreciate the benefits of doing them. Activities that require rewards, extrinsic motivation, people do because there is a reward, not because they want to do it. It is not quite as black and white as that, but it is a good starting point – read on!

The Definitions

Let's look at the "proper" definitions of these as explained by researches Edward Deci and Richard Ryan, authors of Self Determination theory (SDT) – a paper you will become familiar with as you follow these blogs.

Intrinsic Motivation: "the doing of an activity for its inherent satisfactions rather than for some separable consequence" [1]

- They identify three intrinsic motivators: competence (or mastery), autonomy and relatedness, forming the basis of their Self-Determination Theory

Extrinsic Motivation: is "a construct that pertains whenever an activity is done in order to attain some separable time" [2]

- In terms of gamification, this would be considered any reward that was given to a user as an incentive to do something, for example, badges or prizes.

Needs and Motivations

There are many theories and frameworks that look at how humans are motivated. Two of the most well-known are Maslow's hierarchy of needs [3] and Self Determination Theory [1].

Maslow's Hierarchy of Needs

First, let's look at Maslow. Now, a warning. Maslow is widely taught, but there are many who say that his work is not founded in good research, so must be taken with a pinch of salt. For instance, the top tier of his pyramid of needs is "self-actualization", but there is very little in the way of proof of what that might be or how one might truly achieve it! [4] However, the hierarchy of needs is a useful aide-mémoire so to speak, as it helps to visualise what drives humans in a simple and approachable way.

Basically, the Hierarchy of Needs shows us that there are needs that must be fulfilled before other needs can be fulfilled. Whilst the order may be slightly different depending on context, generally, we need to have our physiological needs and safety covered before love and belonging are important. Then we can think about self-esteem and finally self-actualization.

Now it isn't that simple really, for instance for some esteem might be more important than love and belonging, but you get the idea!
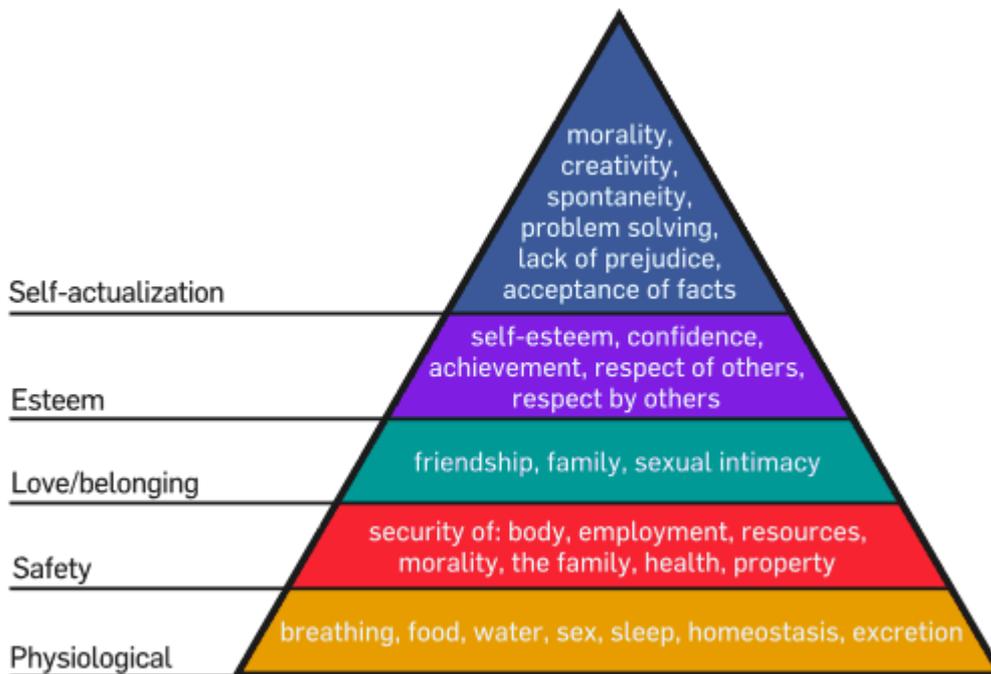
Self Determination Theory

Proposed by Edward Deci and Richard Ryan, Self Determination Theory is the result of many years of research and presents three basic needs of humans, Relatedness, Autonomy and Competence.

R.A.M.P

Relatedness

Relatedness is experienced when people feel they are socially connected to each other in some way. It is a sense of belonging, being wanted or needed. In the "real world" this is often satisfied by friendships and family. At work, this can be satisfied by working relationships and friendships with colleagues. In the virtual world, we must rely on social networks or tools that allow people to connect to each other. For instance, if you look at many of the best multi-player games, they have ways to communicate with others, create teams and teams.

In gamification, we often look to create environments that allow for collaboration, but also team competitions. This allows people to work together, but also to have a bit friendly

challenge between teams. It is usually best to avoid one-to-one competitions, these can lead to unpleasant behaviours as individuals set out to "win" especially if there is a tangible and valuable reward on offer!

Another word on competition. You will read about how bad it can be. However, if you look at sports people, such as tennis players, they often form strong bonds with other players whom they are competing with. One of the reasons for this is that they have a shared interest. Not only this, they can relate to each other. Imagine how many people can relate to Andy Murray's reality as a high-profile tennis player?

Autonomy

Autonomy is loosely defined as the ability to make free, independent choices without coercion, or agency. In R.A.M.P, I am using autonomy to refer the ability to make choices as well as the freedom for self-expression and creativity. If someone is fully autonomous, they are essentially free to do what they choose, when they choose, how they choose. Obviously, this is not always possible in the real world. Within a corporate setting, for instance, autonomy may look more like a lack of micro-management and the ability to choose one's own solutions to problems. Steve Jobs famously said, "It doesn't make sense to hire smart people and then tell them what to do; we hire smart people so they can tell us what to do".

In a gamified solution, autonomy could look like several things. It could be that you create a learning experience that allows users to choose their own path through, giving them choices of how to progress. It could be that you include tools to allow the user to create an avatar, or even their own materials to share back to others (slipping into Altruistic Purpose a little).

Mastery (Competence)

Master, or competence as it is referred to in SDT (but RACP did not have as nice a ring to it as [RAMP](...)...), in motivational terms is the desire to be good at something, to overcome challenges, learn and improve and eventually master it. It is easy to imagine how this might work in education, be it school or corporate. There is an obvious learning objective! Anywhere you are learning a new skill are acquiring knowledge can fit within a path to mastery.

In games and gamification, the path to mastery is well laid out to the user. There are specific goals that they must achieve. As the user progresses, they are presented with new skills to learn, opportunities to practice their skills and usually a final test where they will be challenged to prove they have mastered those skills. In games this is often a "Boss Battle",

in education this will be an exam!

A key to making this enjoyable and accessible is to ensure that the learning objectives increase in their level of challenge as the users skill increases (Flow [5]). If the challenges are too hard, the user will become frustrated. If they are too easy, they will become bored very quickly.

Purpose

So, now we know where Relatedness, Autonomy and Mastery have come from. But, why did I add purpose? Well, there are two answers, the first is because I saw it in Dan Pink's drive[6] where he used Purpose and ditched Relatedness. In his book purpose was focused on what I would define as *meaningful* purpose. This is a person's need to feel that what they are doing fulfils a purpose in some way. It could be that they need to understand how the cog they make affects the overall system, it could be to know that adding that extra line to Wikipedia somehow improves human knowledge. There is a hideous phrase in gamification that covers this "Epic Meaning". Deci and Ryan explain that for them, meaning is ingrained in all of the three needs defined in Self Determination Theory, not a separate need or motivation [7].

In RAMP I am focusing on *Altruistic* purpose. Altruism, the act of giving selflessly of oneself, in SDT is contained in Relatedness. However, my approach to this has always been related to making a usable set of tools that can help me create solutions for clients, trying to avoid the philosophical and focus on the practical. For this reason, I chose to separate Altruistic Purpose as the strategies to encourage altruism are slightly different to just those used to create social connectedness.
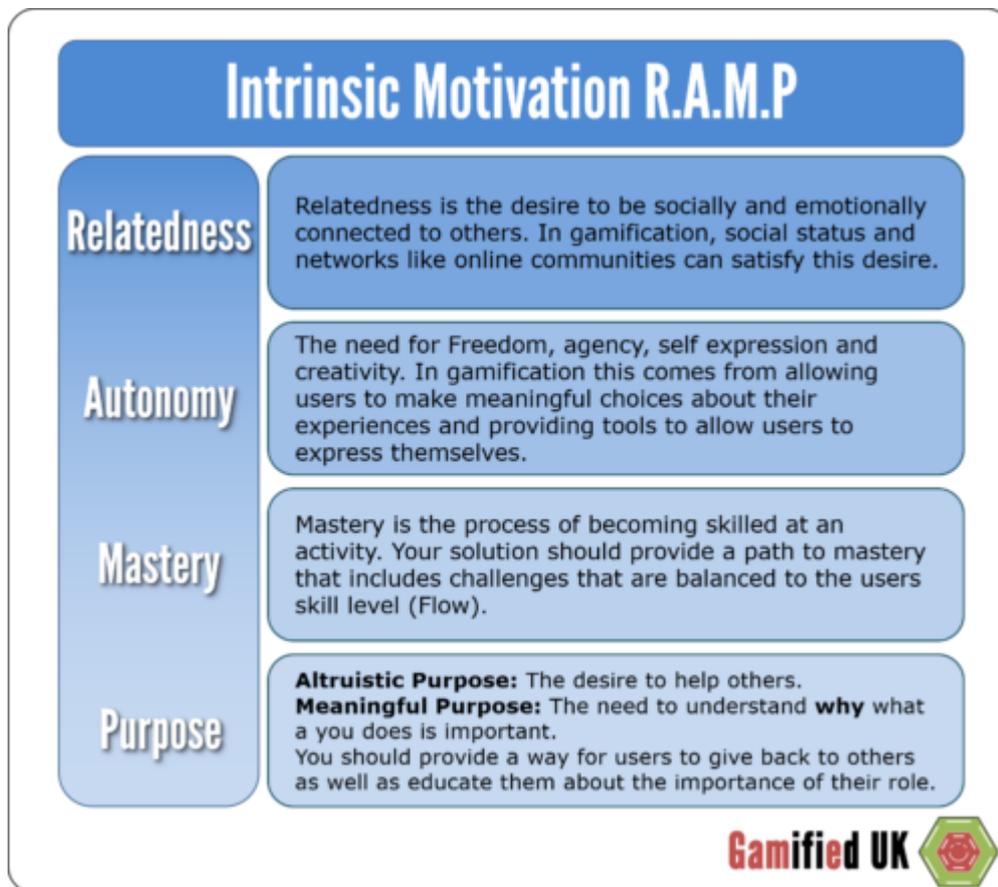
R.A.M.P

Overjustification Effect

It is important to understand that neither intrinsic motivation nor extrinsic motivation is better than the other when used in balance and harmony. It is often viewed that intrinsic motivation is the good guy and extrinsic rewards are the bad guy. However, you often need a bit of both. It is important to remember that something that appears to be an intrinsic motivation, applied in the wrong way will be viewed as an extrinsic reward. For example, social recognition. It is often viewed as intrinsically motivating to be given an elevated social status for achievement. However, if the person who is being elevated is only doing an activity because they know it will bring them greater status, it is an extrinsic motivator! If the social status is bestowed upon them as unintended consequences of excellent

achievement, then it is more intrinsic.

This is where something called "Overjustification" [8] effect needs to be considered. If an extrinsic reward overrides a person's intrinsic desire to do something, then they are experiencing Overjustification effect.

For instance, if you enjoy painting and do it in your spare time, you are intrinsically motivated to paint. If you are creating art just for money, then you are extrinsically motivated. Studies have shown that this often leads to a poorer quality of work. [8]

With this being the case, we often say that extrinsic rewards are great in a situation where RAMP cannot be utilised well. If your job is to stamp a hole in a piece of metal 10,000 times a day, it is hard to do much with intrinsic motivation! However, if you want people to produce high-quality content, paying them based on nothing more than how many words they write is not going to work very well. You will just get one word repeated a million times! You need to create review mechanisms and hook into autonomy and purpose as well as mastery (and potentially relatedness with peer reviewing).

Three Layers of Motivation

By way of a final summary, I have created the Three Layers of Motivation.
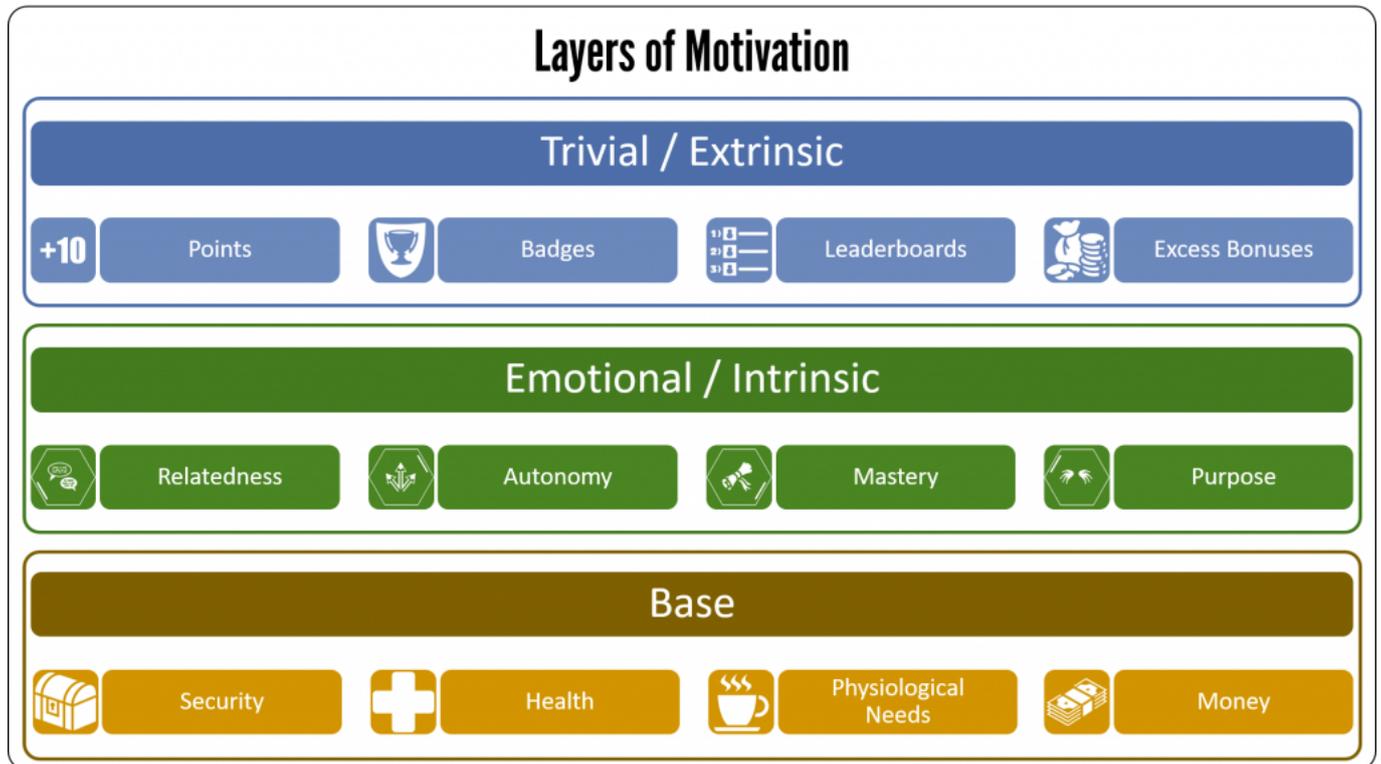
Three Layers of Motivation

This includes elements of RAMP, SDT and Maslow.

Base Needs

Based on Maslow's Hierarchy of Needs, the *Base* layer considers physiological and safety needs. This includes needs such as health welfare, security, shelter, food and the like. I also include money, which whilst it seems a bit odd when that is obviously an extrinsic motivator, in the modern world it encompasses so much more! To be secure, to have a house, to provide for one's family, you need money! We no longer hunt for food and live in caves after all.

Money leads to security. It provides you shelter, it keeps your family safe, it provides food for you all. Before money, jobs, and the like, this was all much more primal. You secured your family by physically protecting them. You hunted for food and you built shelters. For most, this is now taken care of by earning money. We do not need to hunt for food or build huts for shelter; we now buy all those things. To get money, we normally need a job. Whilst many enjoy their jobs, they are unlikely to say, "If I wasn't paid, I'd still work here".

Emotional / Intrinsic

Once our base needs and motivations are satisfied, we can focus on the other more emotional motivations. I describe these as our need for relatedness, autonomy, mastery and purpose (RAMP).

I will go into much more detail in the next section. These needs are referred to as intrinsic motivations and are much more important to our feeling of satisfaction than pure rewards can be.

Trivial / Extrinsic

A lot of gamification efforts sit in this area – often referred to as PBL gamification (Points, Badges and Leaderboards) [9]. They have their place and I will be explaining a lot more about them as we go along.

For now, it is enough to understand that these types of incentives are only truly effective when the first two layers of motivation and needs are satisfied. We will cover a lot more of this later!

Key Learning Points

- A person is intrinsically motivated when they are doing something without the need for extrinsic rewards such as money.
- Extrinsic rewards are those rewards that are given to a person to encourage them to do an activity.
- It is not that simple!
- We are all different and have different needs – it takes time and research to understand how to motivate large groups towards a single goal!

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