

The Magic Formula for Triggering Change

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Are you grappling with how to activate behaviour change in people who just won't seem to budge?

Dr BJ Fogg, Founder of Stanford University's Persuasive Technology Lab (now the [Behaviour Design Lab](#)), developed a model to show that a behavior will only happen when three specific elements (motivation, ability, trigger) happen at the same moment.

[Fogg's Behavior Model](#) means effecting behaviour change in a given situation requires that these three things have to occur **at the same time**:

1. the person must be **motivated**
2. the person must have the **ability, or perceive they have the ability**, to take action
3. an appropriate **trigger** (or prompt) must be applied

Represented as a formula, the model is $B = MAT$ – 'B' (behaviour change), occurs when 'M' (motivation), 'A' (ability) and 'T' (a trigger) converge. Here is each element of the model as defined by Fogg:

Motivation

Motivators are those which are an inherent part of the human experience everywhere:

- sensation – pleasure/pain
- anticipation – hope/fear
- social cohesion – social acceptance/rejection

Ability

Factors influencing ability include time, money, physical effort, brain cycles, social deviance, non-routine. There are two ways to amplify ability – enhance ability to perform the behavior, or make the behaviour simpler to do.

It's important to note that Fogg emphasises and recommends the latter:

You can train people, giving them more skills, more ability to do the target behavior. That's the hard path. Don't take this route unless you really must. Training people is hard work, and most people resist learning new things.

The better path is to make the target behavior easier to do. I call this Simplicity. Ability is the correct general term in the model, but in practice Simplicity is what persuasion designers should seek. By focusing on Simplicity of the target behavior you increase Ability.

Whereas ability implies increasing people's skills and knowledge, simplicity is more about lowering or removing barriers to performing a particular behaviour by making it easy to do:

Simplicity is a function of your scarcest resource at that moment. Think about time as a resource. If you don't have 10 minutes to spend, and the target behavior requires 10 minutes, then it's not simple. Money is another resource. If you don't have \$1, and the behavior requires \$1, then it's not simple.

Michael Wu, Principal Scientist of Analytics at Lithium Technologies, breaks 'simplicity' down further in his presentation to the [2011 Gamification Summit](#) – he identifies:

- **effort** resources (physical and mental effort)
- **scarce** resources (time, money, authority, permission, attention) and
- **adaptability** resources (capacity to break norms – personal/routine, social, cultural)

Access to all these kinds of resources, at the time they are needed, influence whether or not a task is 'simple'. Tasks must not require any more resources than are on hand to be truly simple.

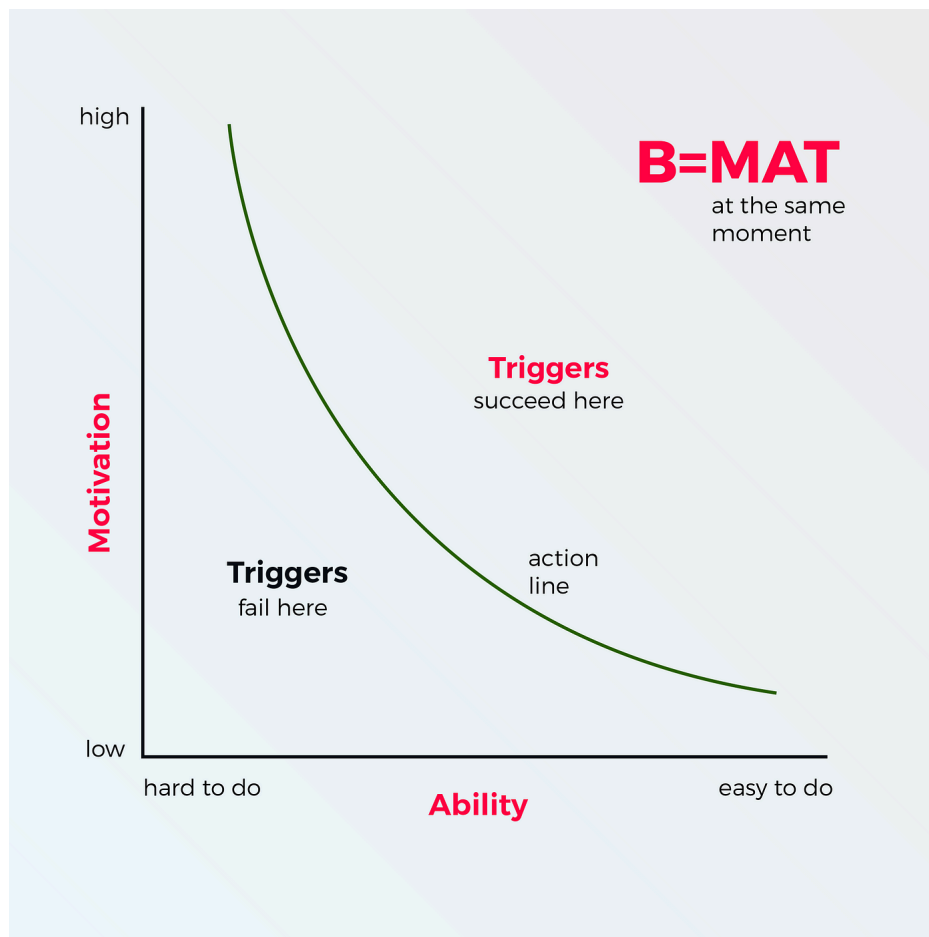
Triggers

Fogg defines three kinds of triggers for three different contexts:

- **sparks** – a motivating trigger, applied where there is high ability but low motivation facilitators
- **enabling** triggers - applied where there is high motivation but low ability
- **signals** – a prompt, applied where both motivation and ability are high

If one of these three elements is missing, the behaviour will not occur.

Graphically, the model can be represented as:





















Wu describes [triggers as prompts](#) for participants to do the behaviour now, and are necessary because people may be hesitant (questioning their motivation), unaware of their ability (unaware of options or simplicity of the task) or distracted (engaged in another routine activity). Triggers can be in any form, as long as the participants are aware of it, and understand what it means.

Timing of a trigger is critical in terms of successfully engaging someone in a behaviour and the participant’s experience. Conversely, poorly timed triggers may frustrate and undermine efforts at engaging people in change.

Behaviour Change Magic

The Persuasive Tech Lab have also developed a tool called the [Behavior Wizard](#), which is a way of matching target behaviours with ways of achieving change.

The Wizard is based on the [Fogg Behaviour Grid](#), which categorises and colour-codes 15 kinds of behaviours according to their type and proposed duration:

	GREEN Do new behavior	BLUE Do familiar behavior	PURPLE Increase behavior intensity	GRAY Decrease behavior intensity	BLACK Stop existing behavior
 DOT One time	 GREEN DOT <i>Do a new behavior one time</i>	 BLUE DOT <i>Do familiar behavior one time</i>	 PURPLE DOT <i>Increase behavior one time</i>	 GRAY DOT <i>Decrease behavior one time</i>	 BLACK DOT <i>Stop behavior one time</i>
 SPAN Period of time	 GREEN SPAN <i>Do behavior for a period of time</i>	 BLUE SPAN <i>Maintain behavior for a period of time</i>	 PURPLE SPAN <i>Increase behavior for a period of time</i>	 GRAY SPAN <i>Decrease behavior for a period of time</i>	 BLACK SPAN <i>Stop behavior for a period of time</i>
 PATH From now on	 GREEN PATH <i>Do new behavior from now on</i>	 BLUE PATH <i>Maintain behavior from now on</i>	 PURPLE PATH <i>Increase behavior from now on</i>	 GRAY PATH <i>Decrease behavior from now on</i>	 BLACK PATH <i>Stop behavior from now on</i>

Behaviour Types:

- New Behaviour (green)
- Familiar Behaviour (blue)
- Increase Behaviour Intensity (purple)
- Decrease Behaviour Intensity (grey)
- Stop Behaviour (black)

Duration:

- Dot (one time eg. install solar panels)
- Span (period of time eg. ride bike to work during summer)
- Path (ongoing eg. eat three serves of vegetables daily)

A 'Purple Span' action might be to ride a bike to work during the warmer months, whereas a Black Path action might be to quit smoking.

This approach is valuable because rather than treating all behaviour change contexts as the same, it recognises that motivation and ability will differ for behaviours previously tried, those which are new, those which it is desired to cease, and the length of commitment to them.

How Games Support the Fogg Model

Investigating what makes games work successfully in terms of player engagement reveals many of the same things that are needed for behaviour change according to Fogg's model, and here Michael Wu outlines exactly [how gamification can support behaviour change](#) in relation to the model:

- *game dynamics use positive feedback (e.g. points, badges, status, progression, customization, surprises, social factors, etc.) to build up the users' **motivation**.*
- *game dynamics increase the perceived **ability** of users by making difficult jobs simpler and more manageable; either through training/practice or by lowering the activation threshold of the target behavior.*
- *game dynamics place **triggers** in the path of motivated users when they feel the greatest excess in their ability.*

The enduring, worldwide attraction to games has happened not by accident but by design. If you are looking to find a way through the fog of how to activate behaviour change, the BMAT model, combined with gamification, could be your beacon of success!