



**An
introduction to
habit theory.**

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Habit theory key terms.



Habit.

A learned 'stimulus–response' association whereby a given stimulus, such as a particular situation and its contextual cues, triggers an impulse to act in a particular way (i.e. the response)¹.

Habitual behaviour.

Any of the behaviours resulting from the 'habit' process.

It is important to note the difference between a 'habit' and 'habitual behaviour'. Whilst habit refers to the stimulus–response association, habitual behaviour refers to these 'responses'. There can be multiple habitual behaviours as part of a habit, and changes to these do not mean changes to the habit.

For example, the habit of making a hot drink in the morning includes clicking the kettle on, getting your mug and then adding the teabag, sugar, hot water and milk. You may decide to stop having sugar, or to start drinking coffee instead, which changes your habitual behaviours to some extent. However, you still have the habit of making a hot drink.

Habitual instigation.

Repeatedly (or 'habitually') deciding to execute a given behaviour. For example, deciding to make a hot drink in the morning.

Habitual execution.

Repeatedly (or 'habitually') going through the process of executing the behaviour. For example, clicking the kettle on, getting a mug and adding a teabag or coffee.

Habitual instigation is key to habit formation and maintenance.

1. Gardner B. A review and analysis of the use of 'habit' in understanding, predicting and influencing health-related behaviour. *Health Psychology Review*. 2014;9(3):277-295.

What is habit theory?

Habit theory explores the psychology behind the habits which make up human behaviour. We humans have a wide range of habits which we act on in our everyday lives, often without even being consciously aware of it. A classic example which many of us may be familiar with is having our first cup of tea (or coffee) on a working day; whether it's on the way to work or at work, it is the first thing many of us do to start our days off right. Have you ever found yourself automatically reaching for the kettle or going to a coffee shop without even thinking about it? You have your habit to thank for that.

Habit theory proposes that our behaviour is tied to the situational contexts in which they occur. By repeatedly executing a particular action or behaviour in a given situation, we develop an association between the two which becomes so strong that the situation alone is enough to trigger the associated action or behaviour without conscious thought.

So, how do we use habit theory to support behaviour change? This paper will take you through the key things you need to know; what habits are and how they are formed, how habits link in with behavioural intention and how habits can be changed.

How do habits form?

Habits form when we repeatedly carry out a certain action or behaviour in response to a given situation. By doing this, we begin to learn and form an association between the two and so the behaviour in question (our response) becomes our default when faced with this situational context and its related cues (the stimulus). Every person and each habit is different, so there's no way to determine exactly how long and how many repetitions it will take for a particular behaviour to become a habit. A study by Lally et al. (2010) found that if a behaviour is repeatedly instigated in response to a given situation on a daily basis, it can take anywhere from 18 to 254 days for it to become a habit, with an average of 66 days².

Key to the development of a habit is the decision to 'instigate' the given response behaviour. If someone habitually decides to carry out a particular behaviour at the same time on a daily basis for example, then they are more likely to form a stimulus–response association between the time of day and doing the behaviour, i.e. they will develop a habit of doing the behaviour at the same time every day. The strongest associations may see this habitual instigation shift from being a conscious decision to an automatic response, to the point where the individual in question may begin executing this behaviour without even having the conscious awareness that they are doing so. In cases like these, habits can be so strong that they override a person's conscious behavioural intentions.

2. Lally P., van Jaarsveld C. H. M., Potts H. W. W., Wardle J. How are habits formed: Modelling habit formation in the real world. *European Journal of Social Psychology*. 2010:998–1009. doi: 10.1002/ejsp.674.

Habit vs behavioural intention?

It goes without saying that the stronger the habit, the more likely the associated behaviour is likely to occur. However, if the habit is strong enough, it can override a person's conscious motivation so that the behaviour occurs without the individual being explicitly aware they are doing it. A person may not intend to carry out their habitual behaviour, but the stimulus provided by the situational context is so strong that it removes intention out of the equation altogether and the action becomes automatic.

Habits can be beneficial in this sense, as their automaticity means that the cognitive resource which would have been spent on doing the habitual behaviour can now be used to think about and focus on other things. An example of this may be thinking about a problem whilst making a hot drink – the behaviours you execute, such as putting in the teabag, sugar, water and milk are automatic and require minimal or no thought at all, allowing you to focus on the problem you were solving. However, this automaticity can be problematic if the habit conflicts with behavioural intention. A prime example of this automaticity becoming problematic is seen in the stimulus–response association of smoking (response) when drinking alcohol at a pub (stimulus). This example of a learned stimulus–response association, of course pre-dates the smoking ban, but its automaticity maintained the habit even after the ban came into effect.

Before the smoking ban in July 2007, many smokers would have a cigarette in a pub with an alcoholic drink. Orbell and Verplanken (2010) conducted research with these people before the ban came into effect and found that many of them strongly intended to comply and stop smoking inside the pub. However, those with stronger tendencies to smoke when drinking were more likely to accidentally 'slip-up' and start the process of lighting and smoking a cigarette when sat inside the pub, despite the ban³. In other words, their stimulus–response association between drinking and smoking was so strong that they automatically instigated and executed their habitual behaviours related to smoking, despite their intentions comply with the ban.

The automaticity of many habits mean they often go unnoticed, which can be problematic when trying to change or break a habit. If someone is unaware of their habit, then it will be hard for them to realise the need to change this, and how they can change this habit, without some help and a gentle nudge.

3. Orbell S., Verplanken B. The automatic component of habit in health behavior: Habit as cue-contingent automaticity. *Health Psychology*. 2010:374–383. doi: 10.1037/a0019596.

How do we change habits?

Key to being able to change a habit is the stimulus–response association in which it is developed and maintained. Understanding a habit in terms of its situational cues (stimulus) and subsequent behaviours (response) will help inform what needs to change and how.

There are three approaches to changing, or ‘breaking’, a habit; remove the stimulus, stop the response and change the association. However, two of these change the habitual behaviour rather than the habit itself; only one challenges the habit. The approaches are as follows:

Habit discontinuity

Habitual discontinuity disrupts the stimulus–response process by targeting the ‘stimulus’ element. It means to discontinue someone’s exposure to the situational context and cues (the stimulus) which trigger the behavioural impulse to act (i.e. the response). However, this method targets the habitual behaviour and not the habit. Although reducing exposure to a situational context will stop the instigation of the habitual behaviour and seemingly inhibit the habit process, this does not mean that the habit is gone or changed; it simply goes dormant.

Reducing exposure to a situation for a period of time does not mean that the habit will be gone when an individual is re-exposed. Instead, it is likely that the habit will resurface and the individual will still have the behavioural impulse provided by the environment, even if they choose not to act on this. If you want to change behaviour, removing the environment for a period of time is not the best approach. Behaviour needs to change within the context in which it occurs to ensure the new behaviour is maintained into the future.

Let’s take the earlier example of someone who tends to smoke when drinking at a pub and consider the steps they may take when trying to reduce the amount they smoke. If they habitually find themselves smoking whilst at the pub, they may make the decision to avoid pubs altogether so to avoid the temptation (the situational cues) which leads them to smoking a cigarette. Although this may seem to work, it is dependent on an individual never going to the pub again. If they were to return to a pub (or in cases of a strong association, simply look at a pub), then the behavioural impulse to smoke will resurface. The habit has not been broken, it just hasn’t been activated.



Habit inhibition

Habit inhibition disrupts the stimulus–response process by targeting the ‘response’ element. It means to stop someone from acting on the behavioural impulses provided by the situational context and cues (i.e. it will stop the response when faced with the stimulus). However, this again targets the habitual behaviour rather than the habit. The fact that someone has a behavioural impulse to inhibit shows that the association and therefore the habit is still present, they are simply choosing not to carry out their associated response. If this habit is strong enough, these habitual behaviours may even be executed automatically and without conscious awareness, which not only means the individual is not always able to inhibit their response but that they are in fact continuing to maintain the habit.

If we return to the smoking example, someone trying to reduce the amount they smoke may simply choose not to act on the behavioural impulse to have a cigarette when drinking in a pub (if they haven’t automatically done so already). However, no matter how many times they stop themselves from smoking, the fact remains that the impulse and therefore the stimulus–response association is still present; the habit is still there, they are just choosing not to act on it. This is unlikely to make the impulse go away and so the individual would be required to have the psychological strength and willpower to reject this impulse whenever it arises at a pub, which may not always be possible.



Habitual substitution

Rather than disrupting the stimulus–response process, habitual substitution instead proposes to change it. It means to overwrite the old habit association with a new one, which would be related to the behaviour change you want to achieve. This behaviour needs to be in direct competition with the old behaviour, so to remove the possibility of people adopting both behaviours in response to the situational context. Through this method, you are maintaining the habit but swapping out the behaviour for a new (hopefully) more desirable one; people maintain the stimulus–response association, but the response has changed for the better.

Again, we return to the smoking example. Rather than avoiding the pub or rejecting their behavioural impulses, the individual would have more success in reducing the amount they smoked if they did the opposite of this. They should expose themselves to the stimulus but when faced with their behavioural impulse, instead instigate another competing behaviour, such as chewing gum (sugar free of course). If this is done repeatedly, then eventually the impulse will begin to shift towards having a piece of chewing gum instead, which will eventually (fingers crossed) become an automatic response.

Using habit theory to change behaviour.

So, how can we use habit theory when trying to change behaviour? Firstly, we have to identify the 'stimulus – response' association process linking the behaviour to a given situational context in order to be sure that the behaviour we want to change is a product of the habit process; if it is not, then why use habit theory to change it? There are plenty of other behavioural theories to help here!

If the 'problem' behaviour to change has indeed been identified as a habitual one, we can employ habit theory and use 'habitual substitution'. When using this approach, it is important to note that the key lies not in changing the situational context or stopping people from acting on their behavioural impulses altogether, but instead in changing their stimulus–response association so that the old 'problem' behaviour is overwritten with a new one. This new behaviour will need to be in direct competition with the old, so to avoid the individual from adopting both behaviours as part of their habitual response. It will also need to link into the behavioural change you want to achieve (obviously), whether it is the desired behaviour change itself or simply a step on the way to achieving this.

How we can help.

At Social Change UK, we incorporate psychology and behavioural science in everything we do to ensure that we understand audience wants and needs. We can create research and interventions which resonate with them and ultimately deliver real impact. Habit theory is just one branch within these disciplines; there are many more to explore, each holding the potential to support behaviour change for the wider social good.

If you want to find out more about the disciplines we employ in our work and how we can help you to work towards creating positive change and delivering social good, then **get in touch with our team today.**



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