



Using behavioral economics to convey the value of paid app subscriptions



With breakthrough thinking emerging across the behavioral sciences, we know more about human behavior than ever before.

In particular, the field of behavioral economics (BE) has seen rapid growth in recent years, using psychological insights about human behavior to help explain how people make economic decisions.

Google Play teamed up with [The Behavioural Architects](#) to explore how behavioral economics can be used to better communicate the value of upgrading from free to paid app subscriptions.



[Peak](#)



[Freeletics](#)

The team worked in collaboration with two app developers - popular brain-training app, [Peak](#), and high intensity training fitness app, [Freeletics](#).

They tested 5 BE concepts into alternative variations of their current in-app upsells and tested them with real users to capture their thoughts, feelings and behaviors towards purchasing a subscription and their motivation for using the apps.

Using an online research platform and mobile screening software, researchers captured users' thoughts, feelings and behaviors towards purchasing a subscription live and in-the-moment for different variation of the app's upsell screens.

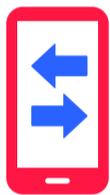
Researchers then dug into the users' motivation for using the apps (and the fitness or brain-training category more generally), providing important context for understanding reactions to the upsell screens.

Behavioral economics concepts applicable to users' behaviors and feelings towards using an app and purchasing a subscription



The power of now

Bring longer-term goals and intentions into the present



Reciprocity

Human beings are conditioned to respond in kind, meaning that we respond to positive actions with similar positive actions



Salience

When something is prominent relative to its surroundings. Salience plays to our subconscious mind by automatically focusing our attention on certain messages



Authority bias

Our tendency to alter our opinions or behaviors to fit those we consider to be an authority on a given subject



Social norms

Common tendency for humans to adopt the opinions and follow the behaviors of the majority



Anchoring

Common human tendency to rely too heavily on the first piece of information offered (the "anchor") when making decisions

Key findings



Make the benefits of your app subscription clear

To override key barriers to upgrade, make sure free users have a clear understanding of the value and benefits of subscribing to your app



You can use BE to optimise how you communicate the paid benefits of your app

The power of BE lies in both making subscription content and features feel more compelling, and connecting with user motivations



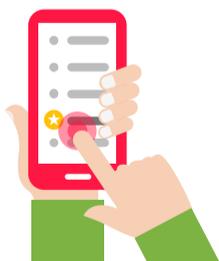
Context matters!

The effectiveness of one BE concept over another will always depend on your app's value proposition, category and target audience, so spend time drawing on user data and insight to determine which will have most potential for you



Be aware of the contextual impact of any BE messaging

When landing on the upsell screen, users tend to zoom in and can get hung up on price, so watch out around the information hierarchy and ensure the key messages you want to land are simple and intuitive



"Hot zone" moments using free versions may represent key opportunities for triggering upgrade

Once you've created your optimal BE upsell, make the most of 'hot zone' moments within app usage, where people feel more excited and emotional and may be more receptive to upgrading

Understanding the barriers to paid app subscriptions



1

User relationships with apps are often fleeting

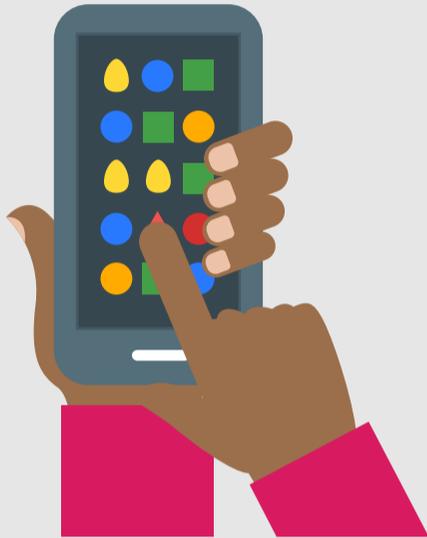
People are downloading, deleting, moving between, and reinstalling apps all the time. This can create a reluctance to invest and make a long-term commitment.

2

Users are anchored to free sources

Already accessing what users perceive to be similar content for free creates a reluctance to pay.

For example, the research found that Peak users were often using a range of free games and free versions of other brain-training apps (e.g. Luminosity and Elevate), and Freeletics users might seek out free content from other sources (e.g. fitness videos on YouTube).

3

Free versions can be 'good enough'

The Peak free users in this study already received four randomised games a day. The unlimited access to 41 Pro games offered with a paid subscription therefore didn't always feel like a compelling enough benefit for signing up; in fact, some users felt they simply wouldn't have the time to play more than four games in a day anyway.

4

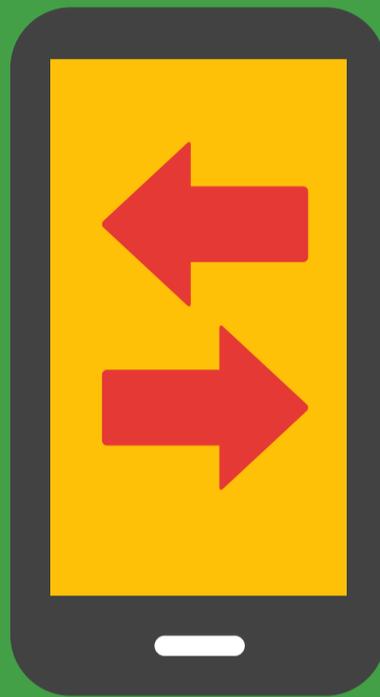
Users don't always understand the benefit of subscription

Crucially, users are not always clear on what the subscription actually offers and why they should bother signing up and paying. For example, some users that we spoke to were not completely sure what the Freeletics subscription offering (the 'Freeletics Coach') really was, so struggled to imagine what benefits upgrading would give them.



To override these barriers, it is critical that users have a clear understanding of valued paid-for content. The first step towards conversion is ensuring that users know exactly what they are paying for.

The role of BE in nudging upsell



Let's start with the three concepts that showed strongest potential for motivating paid subscription: the power of now, reciprocity and salience

The power of now



Bring longer-term goals and intentions into the present

Experiment



The power of now may be especially effective for apps and categories where the benefits might seem a long way off, such as fitness, language, or education.

For example allowing Freeletics users to clearly imagine the future benefits of subscription in the here and now was found to be highly motivating.

Showing how soon a goal can be achieved if they start today tapped into user motivations to see results quickly, helping to reduce the tendency to put off upgrading until later.

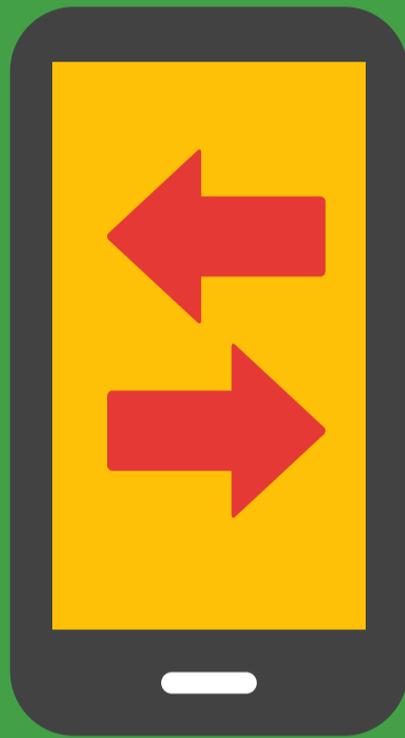
“

[This screen] is enticing.
I love how there is a calendar.
Setting a target makes the end goal feel more achievable.

”

Freeletics user, man

Reciprocity



Human beings are conditioned to respond in kind, meaning that we respond to positive actions with similar positive actions

Experiment

Positive reactions indicate that giving something of value away at the point of upsell can help give users a taste of the type of content available with a subscription, and on a subconscious level, is likely to help build a positive relationship between the user and the app.

By helping free users understand the paid content on offer and creating a 'warm glow', gestures like these may be particularly well-received for apps that don't give much away in the free version.

“

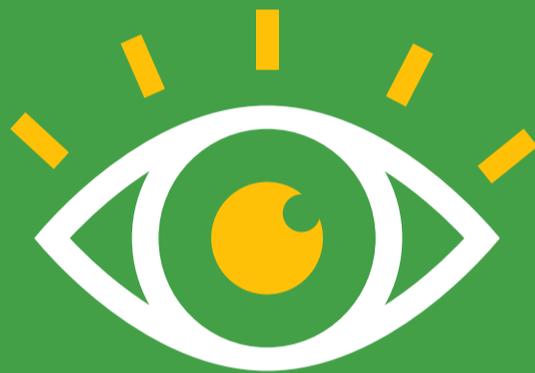
I like that... I never concentrate on my legs because they're quite muscular.

Knowing things like that would really help me... it gives me a little taster of what I'm going to be getting... like paying for good knowledge.

”

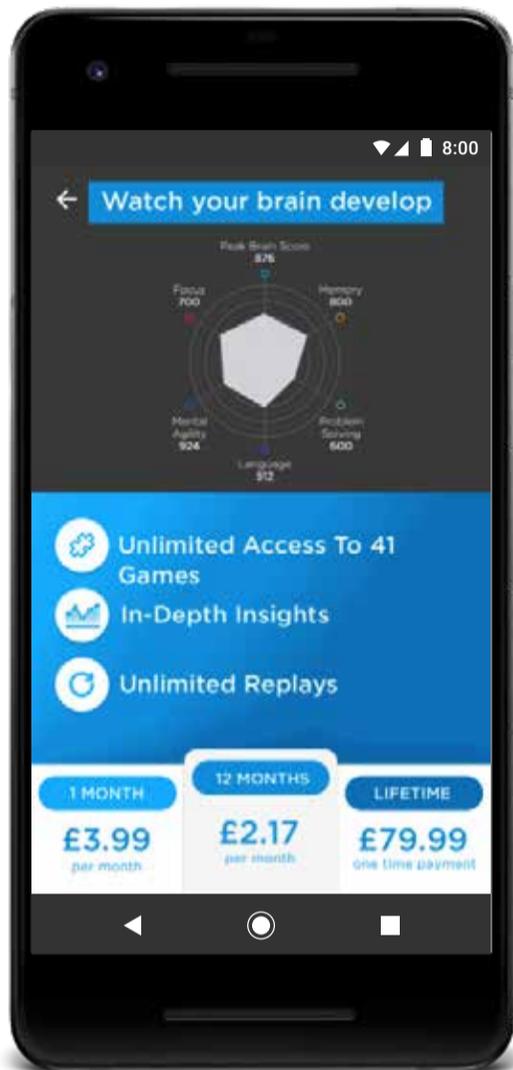
Freeletics user, man





Saliency refers to something being prominent relative to its surroundings. Saliency plays to our subconscious mind by automatically focusing our attention on certain messages

Experiment



We explored the impact of making Peak's subscription benefits - such as rapid brain map development and access to Pro games - more salient by showing dynamic screens at the point of upsell, allowing users to see and vividly imagine the experience of enjoying the Pro version.

Using varied animations helped to deepen user engagement with messaging, increasing openness to sign up. The eye-catching visuals effectively guided user attention away from the pricing options at the bottom of the screen, creating excitement around the content and features ahead of cost.

“
 [This screen] is far more engaging – it takes my mind off the large amount of money at the bottom.

”

Peak user, man

Authority bias



Our tendency to alter our opinions or behaviors to fit those we consider to be an authority on a given subject

Experiment

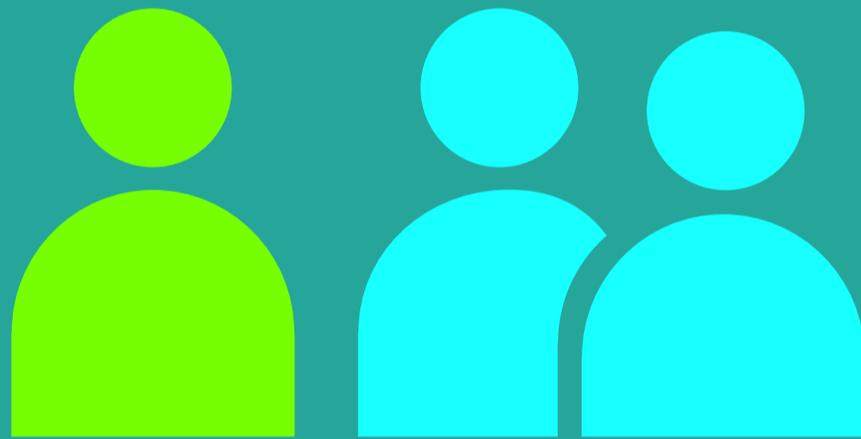
We looked at the impact of Authority bias by showing users some of the scientific partners involved in the development of Peak Pro games.

Calling out the authority of Peak's collaborations created confidence in the games, successfully connecting with user motivations for downloading the app – i.e. actual brain-training and not 'just a game'.

While response was positive for Peak users, the effectiveness of Authority Bias may vary considerably between different apps and categories. For example, users may be less receptive in categories where authority figures are more subjective, like fitness or music apps. It would therefore be necessary to explore the relevance of other authority figures across different category contexts.

“
It's exciting to hear
that qualified
professionals... have
[helped] develop the
games... makes it
seem like it will work.
”

Peak user, woman



Common tendency for humans to adopt the opinions and follow the behaviors of the majority

Experiment

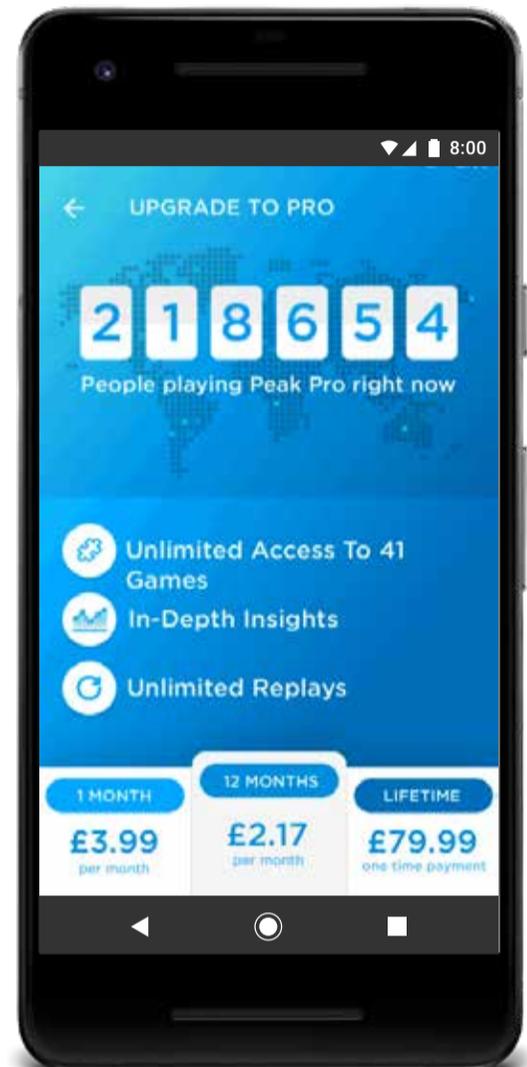


We explored social norms messaging with both Peak and Freeletics in two different ways, which showed differing levels of potential for steering upgrade among existing free users.

1. Social norms via leveraging a global community
2. Social norms via testimonials

Social norms via leveraging a global community

Within Peak, where score comparison with other users is a key feature, the idea of a global community all playing the Pro games generated greater interest. Showing an increasing ticker of current Peak Pro users helped to highlight the app's popularity and could create a feeling of not wanting to miss out - FOMO!



“
The numbers are going up! It makes me feel like I should be a part of those numbers... then it makes me feel bad because I am the odd one out in a way.
”

Peak user, woman



On the other hand, for Freeletics, the idea of a global community base had less relevance as it was not tied to a recognised feature of the Pro version. This was especially the case with those that saw their fitness as a personal journey.

Different reactions to the Freeletics and Peak upsells suggest that social norms messaging via a community of engaged users is likely to resonate more powerfully for apps whose key features rely on large numbers of users, like social fitness or online dating apps.

“

What does it mean by ‘global community’? I just want to get on and do my work-out. I’m not interested in hearing about other people that use Freeletics.

”

Freeletics user, man

Social norms via testimonials



We also captured reactions to positive user testimonials at the point of upsell.

“
I’m always a bit skeptical of sites that put up their own reviews. I don’t even know these people – why would I trust their opinion? I feel pushed into buying it, which makes me not want to buy it.
”

Peak user, woman

Both Peak and Freeletics users met these screens with considerable skepticism. Bearing in mind that people are likely to have already encountered reviews through the Play Store at the time of download, in-app testimonials further down the line can make people feel suspicious and overly ‘marketed to’. Users were especially wary when reviews felt a bit too good to be true, e.g. multiple five-star reviews!

Social norms via testimonials

“

I'm always wary of testimonials in case they've been paid. And you don't know the circumstances under which 'Marcus' is training. Always take [these] with a pinch of salt.

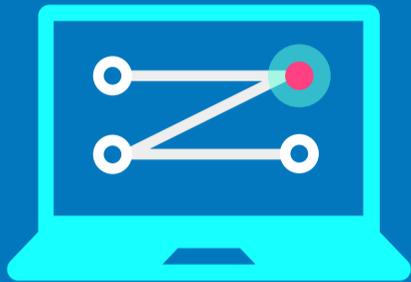
”

Freeletics user, man

However, while social proofing via testimonials may lack integrity within apps, there may be an opportunity to leverage subscription testimonials within the Play Store, which is seen as a more credible and trusted source of user feedback.



The challenge of price



Reactions of the different variations showed how quickly users' attention is drawn to pricing options when landing on the upsell screen

Users can become overly fixated on price, skipping over all over messaging, especially when they lack a clear understanding of value, paid-for content





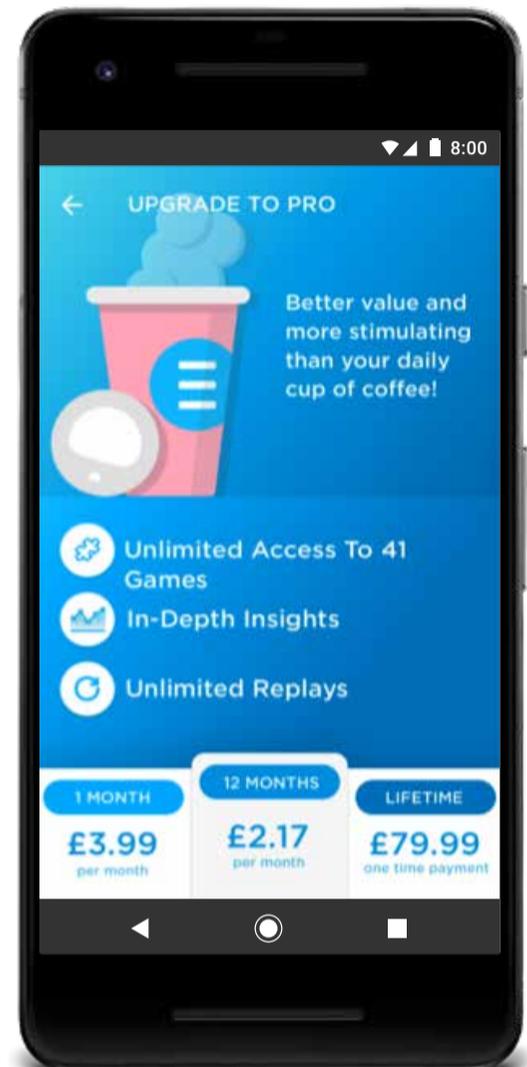
To minimise the risk of users getting hung up on price, non-price messaging has to work really hard to grab people's attention:

- The hierarchy of information on the upsell screen should be optimised to ensure that key upsell messages are not missed. For example, the large screen space often taken up by pricing options risks compounding a focus on price at the expense of other messaging.
- Upsell information needs to be super clear and intuitive to interpret. Simple messaging supported by imagery for easy processing of information is most effective, as users will tend to scan past large, dense blocks of text.

Using price anchoring to increase value perceptions

While price was not the focus of this project, we lightly explored the concept of price anchoring with Peak users by comparing the cost of a Peak Pro subscription with the cost of a daily cup of coffee.

When making judgements, we often rely on reference points (or 'anchors') to help inform our decision. Our perception of the value of something can vary depending on what we have anchored to. For example, estate agents often use anchoring to influence potential house buyers by showing them properties outside of their buying criteria (e.g. too pricey, but highly desirable) in order to influence how much they are willing to spend on other properties.





Positive user feedback suggests that anchoring the cost of a subscription to a relatively cheap, everyday expense in this way can increase value perceptions for free users.

“
It's only the cost of one coffee for one month of subscription... [the cost] does feel cheaper in this [screen].
”

Peak user, woman

Other apps might consider anchoring subscription costs to known category reference points to maximise relevance and impact. For example, comparing the cost of a fitness app subscription to a premium gym membership, or the cost of a language app subscription to taking French lessons, is likely to make the subscriptions appear cheaper than they would in isolation.

However, there is a watch-out when it comes to using high price anchors. Language such as 'life-time subscription' can feel jarring in the context of fleeting app usage behaviors, and extreme anchors (e.g. up to hundreds of pounds!) can actually distract users, rather than steer an easy decision.

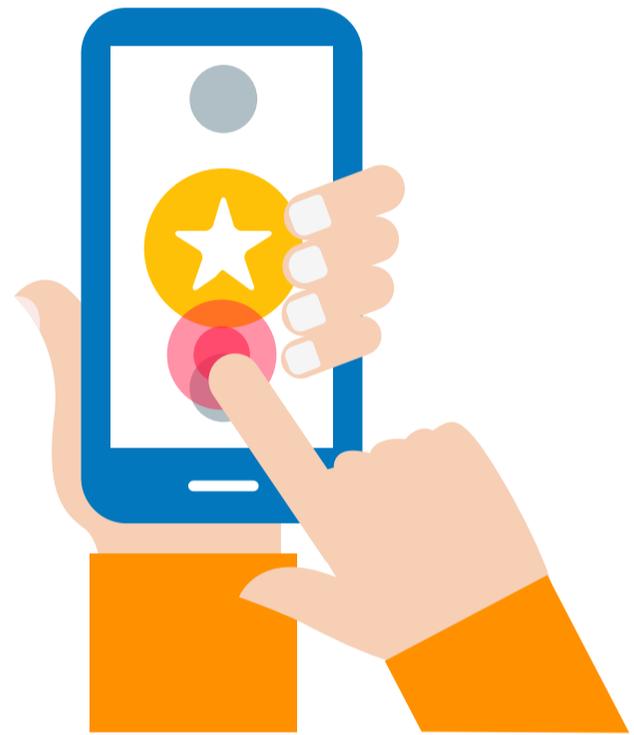
“
The lifetime plan (£79.99) seems very expensive... I'd be more interested in signing up for a week free trial of Peak Pro. Or another shorter cheap plan, like one month for £2.50.
”

Peak user, woman

Playing to emotional ‘hot zones’ within app usage

It is worth considering points during app usage when users may be most receptive to upsell nudges.

Certain moments of the app experience may create emotional ‘hot zones’ in which users are more emotional, excited and particularly motivated to sign up to a paid subscription. For example, with Peak, feeling especially competitive after reviewing brain-map progress; with Freeletics, feeling proud after inputting a personal fitness goal (e.g. losing 1 kilo).



Key findings



Make the benefits of your app subscription clear



Be aware of the contextual impact of any BE messaging



"Hot zone" moments using free versions may represent key opportunities for triggering upgrade



You can use BE to optimise how you communicate the paid benefits of your app



Context matters!



For more information on growing your subscriptions business with Google Play, visit g.co/play/sellsubscriptions

To learn more about how to optimise your app for decision making, check out medium.com/googleplaydev