MANIPULATIVE DESIGNS IN ONLINE GAMES AND ON GAMING PLATFORMS

This additional information presents and categorises examples of manipulative designs that were found during the field study to identify "Unfair practices and manipulative designs in online games and on gaming platforms".

11. March 2025

GAMING-SPECIFIC[1] DARK PATTERNS[2]

1. Pressure from time patterns[3]

1.1. Prompting daily playing

Roblox/Adopt me!:[4] "*Spiele **jeden Tag**, um **bessere Preise** zu erhalten.*" ("*Play **every day** to get **better prices.***")

Fortnite: "*Schließe **täglich** 3 Aufträge ab, um **Bonus-EP**[5] zu erhalten.*" ("*Complete 3 **daily quests** to get **bonus EP***") (see Figure 1)

⋯➤ Encouraging users to play daily in order to obtain better prices or progress faster will entice them to do just that.

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[1] Gaming-specific dark patterns are manipulative practices that are primarily, though not exclusively, found in the online gaming market segment. Due to the increasing integration of gaming elements in areas outside gaming ("gamification"), these mechanisms also increasingly appear in other digital market segments such as social networks, online marketplaces, and booking platforms.

[2] Some of the following examples of manipulative designs and practices represent, in vzbv's view, infringements of Article 25 of the Digital Services Act (DSA) and/or the German Act against Unfair Competition (UWG). vzbv has issued legal warnings against the five game providers analysed. As the DSA ban on dark patterns only applies to online platforms and lacks an equivalent provision in the UWG or UCP Directive, it is not possible to take legal action against some of the manipulative practices that appear in online games. The existing rule on aggressive commercial practices pursuant to Article 4a UWG is very narrowly defined. Legal action against dark patterns (for example, options that are designed so as to emphasise or highlight one option over another) thus entails enormous procedural risks.

[3] Time patterns is a collective term for mechanisms that may influence the amount of time gamers spend playing to the benefit of the game manufacturer or platform.

[4] The examples provided are based on a test of five gaming apps and/or platforms. The following manufacturers and/or platforms and games were tested: Epic Games (Fortnite), Roblox (Adopt Me!), Scopely (Monopoly Go), Supercell (Clash of Clans), Sybo ApS (Subway Surfers). The test was part of vzbv's participation in the BEUC action "Game Over". The test was carried out between 23 July and 23 September 2024. vzbv assessed the results using a system of pre-established categories based on set criteria. The latest versions of the games at the time the test was carried out were used on a Samsung Galaxy S23 (Android 14). Google Play Store and/or Epic Games Store were used to download the games. The choice of providers followed the BEUC action "Game Over" and initially considered the three free offers from that action. The popular game apps "Monopoly Go" and "Subway Surfers" were then added to the selection, as these apps had already stood out for their use of manipulative and unfair practices.

[5] This enables faster progress in the game.

Figure 1: Fortnite, prompting daily play.

Figure 2: Subway Surfers, prompting daily play.

⇢ Children and adolescents, in particular, might fall into undesirable habits and the incentives offered may lead to excessive gaming.

⇢ This problematic practice can potentially lead to more time being spent playing the game.

1.2. Countdowns

Roblox: "Starter Pack Royal Egg: Angebot **endet in 1 Days, 11 h, 58 min**" ("Starter Pack Royal Egg: Offer **ends in 1 day, 11 h, 58 min**")[6]

Subway Surfers: "*Sieh dir mehr Werbevideos an, um mehr Belohnungen zu verdienen, **bevor die Zeit abläuft!**". ("*Watch more adverts to earn more rewards **before time runs out!**")

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[6] The offer is combined with a direct invitation to purchase. This means the offer is presented without users actually choosing to visit the game shop.

Figure 3: Clash of Clans, countdown for the special offer.

⟶ Two types of countdown stood out in the games tested: countdowns that show how long offers are still available, and countdowns that state from which point in time things become available.

⟶ Countdowns give the impression that anyone not online (at the right time) is missing out on something (FOMO).[7] The idea is to keep giving gamers a reason to return to the game or not leave it in the first place.

⟶ Countdowns repeatedly appear in various places in games. Ever-present countdowns create a constant feeling of urgency.

⟶ Timers that run down exploit the psychological FOMO principle. People are more motivated to act so as not to miss out.[8]

⟶ The artificial[9] **scarcity of digital products** follows the same principle.

⟶ Countdowns put pressure on gamers and encourage them to maximise the time spent playing and/or to make impulsive purchasing decisions. Young gamers are particularly vulnerable to such strategies.

⟶ This problematic practice can potentially lead to money being spent and/or more time being spent playing the game.

1.3. Pay to skip[10]

Clash of Clans: During activities such as "Verbesserungen" ("Improvements"), "Bauarbeiten" ("Construction work") on buildings or "Ausbildungen" ("Training") of soldiers, a timer runs down, showing how long the activities "last". Gamers can use in-game currency (in this instance: jewels) to reduce the waiting time:

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[7] Cf. https://www.darkpattern.games/pattern/53/fear-of-missing-out.html In addition to countdowns, practices such as progress reports that pop up when users log in can also fuel this fear of missing out. These reports show what has happened while users were away.

[8] Cf. https://www.oxera.com/insights/agenda/articles/bits-of-advice-the-true-colours-of-dark-patterns/#_ftn1

[9] Companies very consciously use countdowns. The "artificiality" of countdowns becomes clear, for example, when they show from which point in time a gift can be redeemed. The company could simply reveal the gift without using the psychological impact of a countdown.

[10] Pay to skip allows users to pay money to skip waiting times. Cf. https://www.darkpattern.games/pattern/34/pay-to-skip.html.

"*Möchtest du die **Verbesserung** von Kanone **abschließen**? 1 Juwel*" ("*Would you like to **complete** the **improvement** of canons? 1 jewel*") (see Figure 4)

Figure 4: Clash of Clans, skip waiting time.

···> Gamers are not informed of the cost in terms of real money.

···> Without using pay to skip, the desired progress in the game would only be possible after the **artificial waiting time** has elapsed.[11]

···> The service provider creates inconvenience for gamers via this artificial waiting time. Progress in the game is restricted and rewards can only be redeemed once the waiting time has passed. This creates an incentive to spend more money in the game.[12] The use of in-game currency also distracts from the cost in actual money.

···> This problematic practice can potentially lead to money being spent and/or more time being spent playing the game.

2. Confusion due to in-game currency

Roblox: The amount of in-game currency (IGC) in the IGC packs offered does not correspond to the cost of the virtual products offered (lack of equivalent value). Users are thus forced to buy more IGC than is needed to buy the desired virtual object. A certain amount of currency is left over (see Figure 5).

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[11] In the test carried out by vzbv, this waiting time could stretch to one hour.

[12] Cf. https://www.darkpattern.games/pattern/34/pay-to-skip.html

Figure 5: Adopt me (Roblox), lack of equivalent value between IGC pack and the cost of virtual objects.
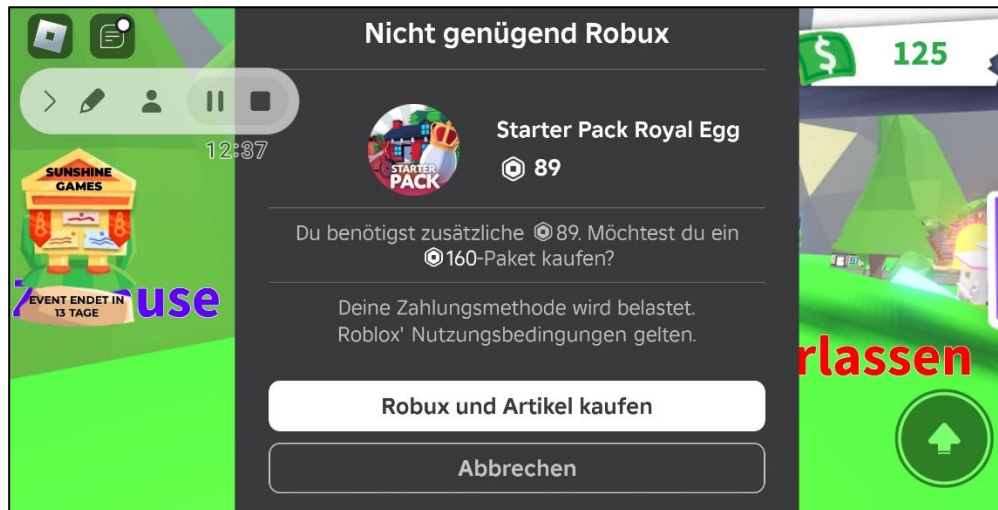
Roblox: The purchased products do not provide any information about the actual financial value (real money).

⇢ All the games tested use IGC and offer only set-value IGC packs. This means users themselves cannot determine the quantity of IGC. Also, there is usually no fixed conversion rate to real money.

⇢ The lack of equivalence between IGC packs and the cost of virtual objects means a certain amount of money is left over, which may tempt users to make additional purchases they had not necessarily intended.

⇢ Different IGCs per game entail several conversion rates. Figuring out the value in euros is thus more difficult.

⇢ Users are deprived of their rights, as some service providers' general terms and conditions (GTCs) state that the value of virtual products as well as of IGC can change at any time.

⇢ In-game currency hides the true cost of in-game purchases. Stating prices in in-game currency without any reference to real prices can cause users to make purchasing decisions they would otherwise never have made.

⇢ This problematic practice can potentially lead to money being spent.

3. Hyper-engaging dark patterns (HEDP)[13]

3.1. Random or unclear content (such as loot boxes)

Subway Surfers' mystery boxes: While the probability of obtaining certain content is stated,[14] the information is of little value to users: "*20 Prozent Wahrscheinlichkeit für 1-3 Marken*" ("*20 percent probability of 1-3 tokens*") (see Figure 6)

Roblox: The specific contents of the "Starter Pack Royal Egg" remain unclear. The advertising promises: „*Garantiert **ungewöhnliches oder besseres** Haustier*" ("***Unusual or better** pet guaranteed*" (see Figure 6).

Subway Surfers: "*Erhalte **bis zu** 10.000 Münzen*" ("*Receive **up to** 10,000 coins*") for watching advertising videos.[15]

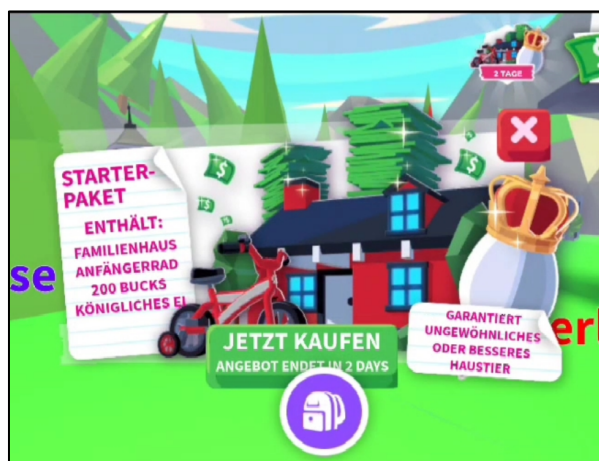Figure 7: Adopt me (Roblox), unclear content.

Figure 6: Subway Surfers, unclear probability of receiving certain content

⋯⟩ In some cases, probabilities are stated that are not helpful to users.

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[13] HEDP exploit users' attentional resources by – with the help of algorithms – constantly making claims on conscious attention. Esposito/ Cathoud Ferreira (2024) put it as follows: "Behavioural reinforcement is thus a key component of HEPDs. More precisely, behavioural reinforcement exploits the brain's dopaminergic system, which attaches a craving for repetition to memories of satiation and pleasure. […] Dopamine is a hormone that plays a significant role in motivation and, crucially, habit formation. […] In simplistic terms, the activation of the dopaminergic system tells the individual to repeat what they did before to get that pleasant reward again.[…] Importantly, the dopamine circuit leads to the strongest stimulus not as a reward to a just-ended experience of satiation and pleasure but in case of anticipation of a possible reward." In: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/038CED800E0CAD86EC5B5216E0AA88DD/S1867299X24000084a.pdf

[14] The console manufacturers Microsoft, Sony and Nintendo now oblige developers to reveal the probability of winning certain content in the loot boxes they offer in games. Cf.: https://www.heise.de/news/Playstation-Xbox-Switch-Entwickler-muessen-Lootbox-Gewinnchancen-offenlegen-4490887.html.

[15] With respect to the eight advertising videos watched as part of the test, the user received a maximum of 800 coins.

⋯⟩ Unknown rewards and unknown content from loot boxes can, in the hope of receiving desired items,[16] activate the brain's reward system and release dopamine.[17]

⋯⟩ This problematic practice can potentially lead to money being spent and/or more time being spent playing the game.

3.2. Activity symbols and push messages

Red activity symbols (see Figure 2 invite users to click on icons (for example, for the shop). They indicate that something new has occurred.

All the games tested ask users, via the mobile end device's settings, whether they want to allow push messages.

Figure 8: Clash of Clans, notifications request.
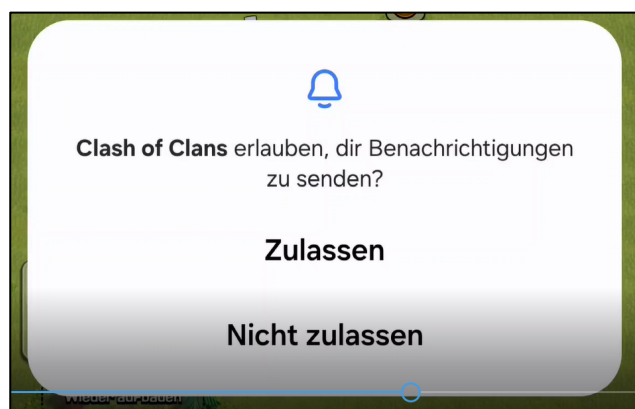
⋯⟩ The providers of games can lure users back to the game or the platform via "fake notifications" such as suggestions about new content/posts or information regarding unimportant updates.

⋯⟩ This problematic practice can potentially lead to money being spent and/or more time being spent playing the game.

3.3. Sound and lighting effects when presenting offers

Clash of Clans: The provider of the game uses bright colours, spotlights shine, and it rains confetti when a new special offer is presented in the shop (see Figure 9).

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[16] Cf. https://www.darkpattern.games/pattern/38/gambling-loot-boxes.html

[17] Dopamine is a messenger substance between nerve cells. "Situations associated with rewards are, in a certain sense, 'liked' by dopamine and then stored in addictive memory as something associated with reward." Scientists thus assume that dopamine plays a key role in the development of addictive behaviour. In: https://www.aok.de/pk/magazin/koerper-psyche/sucht/von-dopamin-und-suchtverhalten-bis-zu-dopamin-detox/.

Figure 9: Clash of Clans, use of confetti and lights to present offers.

Figure 10: Monopoly Go, fireworks and gifts.

Subway Surfers: Elaborate opening ceremony for the "secret boxes" (reward for logging in daily): The box is adorned with question marks and positioned centrally on the screen, where it bounces up and down. Spotlights shine. Clicking on the box causes it to open and the gift appears.

⟶ Striking sound and lighting effects aim to make gamers associate receiving a purchase offer or a reward with pleasurable experiences.

⟶ This problematic practice can potentially lead to money being spent and/or more time being spent playing the game.

3.4. Autoplay

Monopoly Go: The provider enables "**non-stop gaming**" via "autoplay". This means gamers no longer have to click to roll dice, but rather "*tippen, um zu stoppen*" ("*click to stop*") rolling the dice (see Figure 11)

Figure 11: Monopoly Go, autoplay.

⋯⟩ By reversing this mechanism, continuous playing becomes "the norm". Gamers must take action in order to stop playing.[18]

⋯⟩ The high frequency of events and continuity can keep gamers playing. The board game and the earning of money as an ongoing positive side-effect happen "by themselves" due to the automated rolling of dice. This practice makes it harder to quit playing. In effect, the game can be played non-stop.[19]

⋯⟩ This problematic practice can potentially lead to more time being spent playing the game.

3.5. Reward systems

Subway Surfers: "***Sieh dir 10 Werbeclips im Spiel an, um Belohnungen zu erhalten***" ("***Watch 10 advertising clips in the game to get rewards***").

Subway Surfers: Daily login brings rewards.

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[18] HEDP can restrict users' ability to make rational decisions and may compel automatic actions and habits. Cf. Esposito/Cathoud Ferreira (2024).
[19] Cf. Meyer et al (2010): https://gerhard.meyer.uni-bremen.de/index_dateien/Sucht_6_2010__Messinstrument.pdf

Monopoly Go: "**Sammle** Sticker, **um Belohnungen zu erhalten.**" ("**Collect** stickers **to get rewards**.") (see Figure 12).

Figure 12: Monopoly Go, reward system with stickers.

⇢ Reward systems in games (with their partially unknown contents) address the brain's reward system. Playing the game becomes associated with the positive expectation of a reward (dopamine).[20]

⇢ Gamers usually do not know what kind of reward the algorithm has in store for them. This has similarities to gambling. The rewards can differ greatly.

⇢ Young users, in particular, want to progress in the game. Offers such as rewards in exchange for advertising can pressurise users into watching more ads in order to progress in the game.

⇢ Reward systems make it possible to play several games at the same time.[21] They are an additional progression system – in addition to regular progress in games – and may keep gamers playing.

⇢ This problematic practice can potentially lead to money being spent and/or more time being spent playing the game.

ADDITIONAL DARK PATTERNS IN GAMES

In addition to manipulative design practices that are particularly striking in the gaming sector, online games use dark patterns that are also common in other digital sectors, such as online marketplaces and social media platforms.

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[20] Cf. https://www.aok.de/pk/magazin/koerper-psyche/sucht/von-dopamin-und-suchtverhalten-bis-zu-dopamin-detox/
[21] Cf. Meyer et al (2010): https://gerhard.meyer.uni-bremen.de/index_dateien/Sucht_6_2010__Messinstrument.pdf

1. Highlighting certain options

Roblox: Expensive Robux[22] packs in the shop are highlighted with colour or additional descriptions such as "am beliebtesten" ("most popular") (see Figure 13).

⟿ This problematic practice can potentially lead to money being spent.

Figure 13: Roblox, highlighting expensive IGC packs.
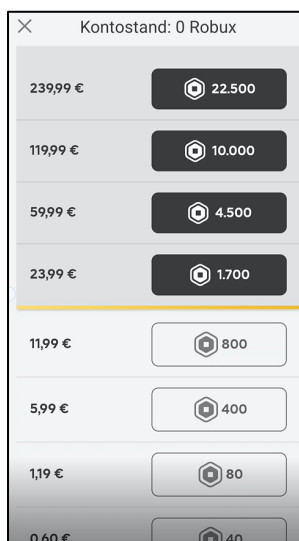
2. Requiring multiple clicks

Subway Surfers: Users have to individually disable cookies for certain data processing purposes as well as for the sharing of data with third parties and advertising partners with respect to the legal basis "berechtigtes Interesse" ("legitimate interest")" (see Figure 14).

⟿ This problematic practice can potentially lead to the sharing of more data.

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[22] IGC

Figure 14: Subway Surfers, data privacy default settings.
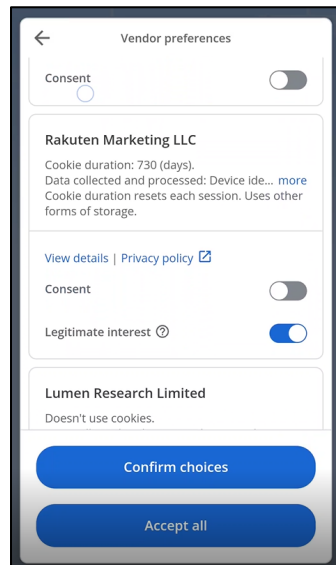
3. Repeated prompts

Monopoly Go: The provider repeatedly calls on gamers to add friends to the game, to connect to other users, and to login using their Facebook account (see Figures 15 and 16).

⋯⋗ This problematic practice can potentially lead to the sharing of more data.

Figure 16: Monopoly Go, prompting users to add contacts

Figure 15: Monopoly Go, prompting users to add contacts

4. Crossed-out prices

Fortnite: In the Epic Games Store a sale price is listed alongside a crossed out higher price. This implies a price reduction. In some cases a negative percentage (-33%) is also shown (see Figure 17).

⋯⋙ This problematic practice can potentially lead to money being spent.

Figure 17: Fortnite with crossed-out prices in the shop