A talk for founders

Dark Patterns by an Engineer.

How to grow your startup without the tricks that come with a repayment schedule — the patterns regulators now have names for, the fines they cost, and the one rule you can enforce in code review.

22 slides | 7 cases · 18 named patterns | 2020 – 2026 | Every number from deceptive.design

Meet your teacher / Who put this deck together

Hi, I'm Doron.

Co-founder & CTO at Per Diem. Brooklyn, New York.

I build the ordering apps behind **2,000+ coffee shops and restaurants** — branded mobile and web ordering built deep on Square, now approaching a million orders a month. Per Diem is Y Combinator-backed, started in 2021 with Tomer Molovinsky.

Before this: Director of Platform at Saildrone, and engineering at OpenTable, Apple, Beats Music and Siemens. Studied at UC Berkeley, Haas.

Why this deck: our checkout sits on top of partner APIs. Some of their UX decisions are in the deceptive.design hall of shame. **We inherited a few before we noticed.**

HELLO, MY NAME IS

Doron

Per Diem · YC W21 | 2,000+ businesses | ~1M orders / month | Brooklyn, NY

Why this deck exists

I'm an engineer, not a lawyer. This is the list of tricks I wish someone had shown me before we shipped a checkout — and every case in it is documented on deceptive.design.

Sourced, not remembered.

Every fine, count and example on these slides comes from the deceptive.design catalogue (Harry Brignull, since 2010) and its enforcement database, and is attributed on the last slide. Where I add my own framing, the slide says so.

Part one

The bill

What the patterns have cost — six enforcement actions with a number attached, and the two that were about checkout UX.

Part two

Seven tricks you'll be tempted by

One hall-of-shame case per slide: what they did, what it cost, and the honest version worth stealing.

Part three

The line test

Persuasion vs. deception on the same widget, why it's a loan not a hack, and who is enforcing.

Part four

Your move

One rule you can enforce in code review, what not to copy, and your first 90 days.

$1.3B

and that's just the six on this slide.

The deceptive.design enforcement database tracks fines and settlements where the interface itself was the offence. None of these companies were ended by the fine. A seed-stage company would be — penalties anchor on the harm, not on your runway.

Start with what it cost.

€405M
Meta / Instagram
Irish DPC · 2022 · children's data defaults

$245M
Epic Games
FTC · 2023 · purchase-flow dark patterns

€225M
WhatsApp
Irish DPC · 2021 · transparency

$175M
Prog Leasing
FTC · 2020 · hidden lease terms

€150M
Google
CNIL · 2021 · cookie refusal harder than accept

$62M
Noom
Class action · 2022 · trial auto-renew, hard to cancel

Source: deceptive.design/enforcement. Fines and settlements, rounded.

Pattern — Sneaking + Forced action / Epic Games / 2023

$245M for a button.

Fortnite's purchase flow let a single mis-press buy an item, kept saved cards charging without consent, and locked the accounts of people who disputed charges. The FTC named dark patterns in the order itself.

It's the largest refund order the FTC had issued at the time — and it was separate from the $275M privacy penalty. Two fines, one checkout.

$245M

refunded to consumers under the FTC order

$275M

separate COPPA penalty in the same action

1 press

enough to buy an item in the flow the FTC described

Steal this

A purchase that can happen by accident is not a conversion. Put a confirmation on anything that moves money, and never punish a dispute.

Source: deceptive.design/enforcement — In the Matter of Epic Games, Inc (FTC, 2023).

Pattern — Hidden subscription + Hard to cancel / Noom / 2022

The trial that didn't end.

The model the database calls forced continuity: a cheap trial, an auto-renew into a long plan, and a cancellation path harder than the signup.

Every step is an ordinary growth decision. Stacked together they became a $62M class action — and a warning that shows up in almost every subscription-app enforcement since.

$62M

class-action settlement

Trial → auto-renew

the forced-continuity shape

Steps out > steps in

the cancellation asymmetry at the centre of the case

Steal this

The number of steps to cancel must not exceed the number of steps to subscribe. Make that a product requirement, not a values statement.

Source: deceptive.design/enforcement — Geraldine Mahood v. Noom, Inc. (2022).

18

named patterns. Seven you'll meet this quarter.

- Addictive design
- **Comparison prevention**
- **Confirmshaming**
- Currency confusion
- Disguised ads
- Fake scarcity
- Fake social proof
- Fake urgency
- Forced action
- **Hard to cancel**
- Hidden costs
- Hidden subscription
- **Nagging**
- **Obstruction**
- **Preselection**
- **Sneaking**
- Trick wording
- Visual interference

Blue: the seven with a hall-of-shame case on the next slides. Taxonomy is deceptive.design's; the selection is mine.

“Your food might get cold.”

Customers who entered no tip saw a warning that untipped orders may wait longer for a driver. It was framed as helpful information. It reads as a threat: pay, or your order gets worse.

DoorDash said it was “testing” the prompt. The hall of shame has three separate entries for it, a year apart.

0 → tip

the trigger: a tip field left empty

3

separate hall-of-shame entries for this one prompt

“Testing”

DoorDash's description of it

Steal this

If a behaviour genuinely affects service, show the real number — median wait with and without a tip — and let the data persuade. If you can't show the number, you don't have the argument.

Source: deceptive.design hall of shame — DoorDash tip-pressure entries (Tuohy, Nov 2023; Deceptive Patterns, Aug 2024).

Pattern — Hard to cancel / DoorDash DashPass / 2024

One tap in.
Four screens out.

Manage-subscription is buried in settings. Then a 20%-off annual offer. Then a reason survey — and each reason triggers its own rebuttal. "Too expensive" gets "members save $4–5 per order."

Nothing here is illegal on its own. The pattern is the stack. The user asked to leave and got a sales call.

20% off

the first counter-offer, before the survey

1 rebuttal per reason

the survey answers route to tailored pitches

$4–5 / order

the message shown to "too expensive"

Steal this

One retention offer, then cancel. And put "Cancel" where "Subscribe" was — same surface, same prominence.

Source: deceptive.design hall of shame — "DoorDash: How to cancel DashPass subscription?" (HallOfShame.Design, Jun 2024).

Pattern — Preselection / DoorDash / 2025

The box that was already ticked.

A lapsed DashPass subscriber finishing a one-off order finds a “resubscribe” checkbox pre-checked on the payment screen. A recurring charge is added unless they notice and untick.

The same mechanic appears across the hall of shame for shipping insurance, marketing email and AI-training consent. Data instead of dollars, same trick.

☑️ by default

recurring charge added unless unticked

Payment screen

where attention is on the total, not the boxes

4 categories

money, insurance, email, data — same pattern

Steal this

Default to what the user would choose if they read the screen. Anything recurring, anything paid, anything about their data: unchecked.

Source: deceptive.design hall of shame — “Doordash: Auto-checked resubscription on payment” (Dark Patterns Tip Line, Apr 2025).

Pattern — Comparison prevention / Amazon Kindle / 2024

A strikethrough that compares the wrong thing.

Kindle edition: $12.99. Crossed out beside it: $19.99 — the print list price. A different product, presented as a discount on this one.

The anchor is real; it's just not the anchor for this SKU. Amazon has 31 hall-of-shame entries, the most of any brand, and this is the quietest — which is why it's worth studying.

$12.99 vs $19.99

Kindle price against print list price

31

Amazon entries in the hall of shame — the most of any brand

Wrong join

an engineer's name for it: a comparison across products

Steal this

Strike through only a price this exact SKU was actually sold at. If the anchor isn't yours, it isn't a discount.

Source: deceptive.design hall of shame — "Amazon's Misleading Kindle Price Comparison" (Aug 2024); brand count from the index, Sept 2026.

Pattern — Preselection + Obstruction / Figma / 2025 →

Opted in to AI training before anyone asked.

Early-2025 AI features shipped with content-training consent switched on for every account by default. Users didn't lose money; they lost a choice they didn't know they had.

It's the ticked checkbox applied to data — and the version that GDPR regulators, with 70 enforcement actions in the database, fine most often.

All users

opted in by default at launch

70

GDPR enforcement actions in the deceptive.design law database

2 entries

Figma, 2025 and Jun 2026

Steal this

For anything the user might object to, the default is off and the toggle is where they'd look. If you're relying on people not finding the setting, that's the pattern.

Source: deceptive.design hall of shame — Figma AI-training opt-in (2025); "Figma admins beware" (Jun 2026). Law count: deceptive.design/laws.

Pattern — Nagging / Reddit · TikTok / 2024

Asking again after you said no.

Reddit's repeated push to install the app. TikTok's repeated requests for notifications and contacts after they were declined. Each prompt is individually harmless.

The pattern is the retry loop: a “no” that resets next session. Growth teams like it because the metric only counts eventual yeses. The user experiences being worn down.

Steal this

A decline is a state, not an event. Store it, respect it, and re-ask only when something material changed — and say what changed.

“Not now” ≠ never

the loop resets every session

2 brands

same tag, same mechanic

1 ticket

persisting the decline is a one-ticket fix

Source: deceptive.design hall of shame — Reddit app-download nagging; TikTok permission nagging (HallOfShame.Design, 2024).

An opt-out with a deadline and a maze.

EU users had until 26 June 2024 to keep their posts out of AI training. The right to object existed. Exercising it meant locating a form, giving a reason, and waiting for a decision.

Complainants called it dark patterns in so many words. The EU later opened probes into Meta's addictive-design practices as well.

26 Jun 2024

the deadline to object

Form + reason + wait

the path to "no"

1 tap

the path to "yes"

Steal this

The cost of saying no must equal the cost of saying yes. If "yes" is one tap, "no" is one tap.

Source: deceptive.design hall of shame — "Meta uses 'dark patterns' to thwart AI opt-outs in EU, complaint says" (Jun 2024).

Same widget. Different truth value.

The test: would the user make the same choice if they saw everything clearly? Urgency that is true is just good marketing.

Tactic	Persuasion — keep	Deception — kill
Countdown timer	Real deadline; timer matches it	Timer resets on refresh
Scarcity	Live inventory from your DB	Hard-coded “only 3 left”
Social proof	Real orders, real reviews	Randomised “someone just bought”
Default selection	What most users would pick	Paid add-on pre-checked
Retention offer	One offer, then cancel	Reason survey → tailored rebuttals
Price anchor	This SKU's own prior price	A different product's list price

It's a loan, not a hack.

Every tactic in Part two lifts a metric this quarter: checkout conversion, trial-to-paid, measured churn (because cancelling is hard). The A/B test is green. The board deck looks great.

The repayment arrives later and off the dashboard: chargebacks, then card-network penalties as the ratio climbs; support headcount; reviews you can't delete; real churn once the cohort matures; and a regulator letter timed for Series A diligence.

Steal this

Hard-to-cancel makes your own churn number lie to you. Track disputes, refunds and support volume as first-class growth metrics, or you are optimising a number that can't see the cost.

Now

conversion, trial-to-paid, measured churn all improve

~1%

the chargeback ratio where card networks start penalising merchants

Later

refunds, support, reviews, true churn, regulator letters

Card-network threshold is approximate and changes; verify with your processor.

Jurisdiction follows the customer.

EU users bring GDPR; US users bring the FTC — regardless of where the company sits. Enforcement actions per law in the deceptive.design database:

70	GDPR	EU · enforcement actions
22	Information Society Services Law	Spain · enforcement actions
15	FTC Act	US · enforcement actions
7	ROSCA	US · enforcement actions
5	Consumer Protection Laws	UK · enforcement actions
5	ePrivacy	EU · enforcement actions

Source: deceptive.design/laws (Leiser, Santos & Doshi database, 2023). Not legal advice.

One rule you can enforce in code review.

Every case in Part two is either a constant where a query should be, or a default nobody reviewed. So the fix is not a values doc — it's a lint rule and a review checklist.

Rule one turns an ethics debate into a CI failure. Nobody argues with a lint rule at 6pm on a Friday. Rule two treats defaults as decisions and reviews them like code.

1 day

to ship a CI check that flags literals inside urgency/scarcity components

0 debates

a failing check needs no meeting

2 rules

no literals; no pre-checked money, recurrence or data

Steal this

Any urgency, scarcity, social-proof or price-anchor value must come from a query, never from a literal. And any pre-checked control that is recurring, paid, or about the user's data fails review.

The rule is mine. The cases it was written against are on deceptive.design.

What not to copy.

Every pattern on the preceding slides has a founder-sized rationalisation.

- **“Amazon does it.”** Amazon has 31 entries and a balance sheet that absorbs the fines. Your downside is capped by your runway, not by theirs.
- **The retention maze.** One offer is retention. Three screens with tailored rebuttals is the DashPass entry.
- **Testing it “just to see.”** The A/B test will be green. The metric can't see the repayment — churn, disputes and reviews arrive later.
- **Copying the widget, not the truth.** A countdown is fine. A countdown with a hard-coded deadline is the pattern.
- **Opt-out as a feature.** If you're relying on users not finding the setting, you already know which side of the line you're on.
- **Blaming the partner.** Inherited UX is still your UX. Audit what your payment, delivery and loyalty vendors put in your flow.

Your first 90 days.

One funnel, audited and fixed, beats a values page nobody reads.

Days 1–14

Walk your funnel as a stranger

Screenshot every step of checkout and cancel. Note every price change and every pre-checked box. Map each one to a type on deceptive.design.

Days 15–30

Grep for constants

Find hard-coded urgency, scarcity, social proof and price anchors. Ship the lint rule. Replace literals with queries, or delete the component.

Days 31–60

Fix the exits

Cancel in as many steps as subscribe, on the same surface. One retention offer max. Expect measured churn to rise — that's the true number.

Days 61–90

Price up front, measure disputes

Show the full total before the cart is built. Track chargeback ratio, refund rate and support volume as first-class growth metrics.

If a user can leave as easily as they arrived, everything else is optimisation. If they can't, you don't know your own churn.

Sources.

Taxonomy, brand counts, law counts

deceptive.design — Types, Hall of shame, Laws (Harry Brignull, Testimonium Ltd)
Leiser, Santos & Doshi (2023) — enforcement database behind the Laws page

Fines

deceptive.design/enforcement — Meta/Instagram (DPC 2022), Epic (FTC 2023), WhatsApp (DPC 2021)
Prog Leasing (FTC 2020), Google (CNIL 2021), Mahood v. Noom (2022)

DoorDash

Tuohy — tip-pressure prompt (Nov 2023); Deceptive Patterns (Aug 2024)
HallOfShame.Design — DashPass cancellation (Jun 2024)
Dark Patterns Tip Line — pre-checked resubscription (Apr 2025)

Amazon

Deceptive Patterns — Misleading Kindle price comparison (Aug 2024)

Figma

Figma AI-training opt-in entry (2025); Azstace — “Figma admins beware” (Jun 2026)

Reddit · TikTok

HallOfShame.Design — app-download nagging; permission nagging (2024)

Meta

Deceptive Patterns — EU AI opt-out complaint (Jun 2024)

Caveats

Not legal advice. Site snapshot 2 Sep 2026; counts change as entries are added.
The three-motive grouping, the line test and the code-review rule are mine.