ECSS 2026 · ETHICS WORKSHOP · COMPANION DECK

Anatomy of Social Media Manipulation

A Catalogue of Dark Patterns in Social Media

Thirteen patterns documented by students on TikTok, Instagram, LinkedIn and X, classified with the EDPB taxonomy;

European Data Protection Board (2023). *Guidelines 03/2022 on deceptive design patterns in social media platform interfaces: how to recognise and avoid them*, Version 2.0.

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Six EDPB categories of deceptive design

Overloading

Too many requests, options or steps, so users give in

Continuous prompting · Privacy maze · Too many options

Skipping

The design makes users forget or overlook data protection

Deceptive snugness · Look over there

Stirring

Emotions or visual nudges steer the choice

Emotional steering · Hidden in plain sight

Obstructing

The path to protect oneself is hindered or blocked

Dead end · Longer than necessary · Misleading action

Fickle

Unstable or inconsistent interface that confuses

Lacking hierarchy · Decontextualising · Inconsistent interface

Left in the dark

Information is hidden, ambiguous or contradictory

Conflicting information · Ambiguous wording

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Thirteen patterns, four platforms

#	Pattern	EDPB category · type	Platforms	Clip
01	Infinite scroll and autoplay	Overloading · Continuous prompting	TikTok, Instagram, X	Yes
02	Autoplay with sound behind a legal notice	Skipping · Look over there	TikTok web	Yes
03	Ads blended into the feed	Stirring · Hidden in plain sight	TikTok, Instagram, X	Yes
04	In-app browser	Stirring · Hidden in plain sight	TikTok	Yes
05	Asymmetric cookie banners	Stirring · Hidden in plain sight	Instagram, TikTok web	Yes
06	Privacy maze in ad settings	Overloading · Privacy maze	LinkedIn, Instagram	Yes
07	Obstructed account deletion	Obstructing · Longer than necessary	LinkedIn, Instagram	Yes
08	FOMO and paywalled curiosity	Stirring · Emotional steering	LinkedIn	Yes
09	Nagging and interruptive walls	Overloading · Continuous prompting	Instagram, TikTok web	Yes
10	Paid badge that looks like verification	Left in the dark · Conflicting information	X	Yes
11	Opaque "For You" feed by default	Left in the dark · Ambiguous information	TikTok, Instagram	—
12	Settings menu without hierarchy	Fickle · Lacking hierarchy	Instagram	—
13	Terms accepted implicitly at sign-up	Skipping · Deceptive snugness	Instagram	—

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PATTERN 01

Infinite scroll and autoplay

Overloading · Continuous prompting

TikTok · Instagram Reels · X · flagged by 4 of 8 teams

Trigger

A vertical swipe instantly loads and plays the next video. There is no visible end and no pause between items.

Why it manipulates

It removes natural stopping points and relies on variable rewards, so sessions run longer than intended and time perception blurs.

Legal hook

DSA Art. 25. In Feb 2026 the European Commission preliminarily found TikTok's addictive design in breach of the DSA.



Clip · TikTok mobile app, "For You" feed

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PATTERN 02

Autoplay with sound behind a legal notice

Skipping · Look over there + Obstructing

TikTok web · anonymous visitor, incognito session

Trigger

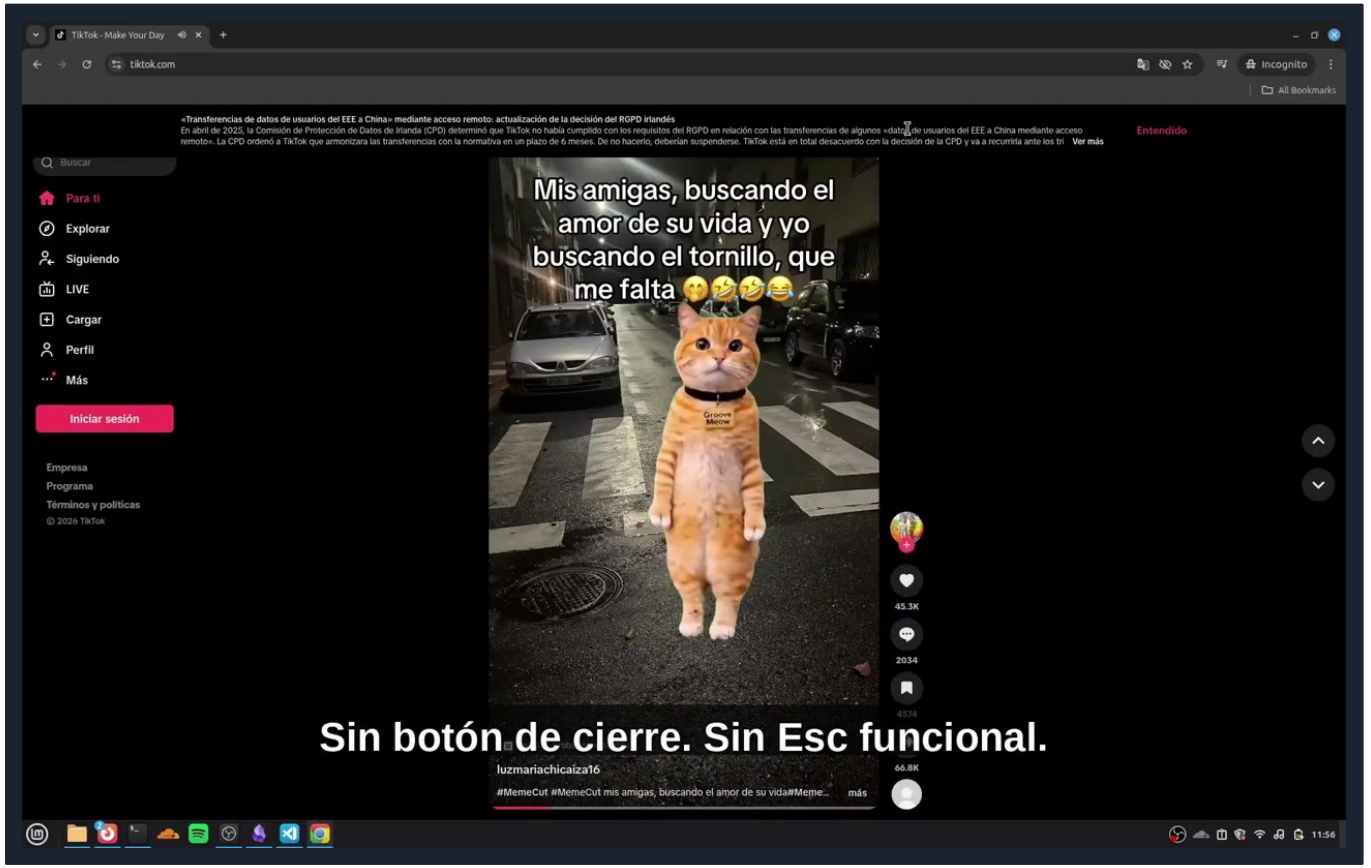
On first load the video plays with audio at 75 %. A notice about EEA–China data transfers covers the volume slider; only "Got it" closes it.

Why it manipulates

A transparency obligation becomes a wall: users cannot mute until they dismiss a legal text they did not ask for.

Legal hook

GDPR Art. 25(2) data protection by default; DSA Art. 25; argued by the team as an aggressive practice under the UCPD.



Clip · TikTok web (captions by the student team, in Spanish)

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PATTERN 03

Ads blended into the feed

Stirring · Hidden in plain sight

TikTok "For You" · Instagram Stories · X timeline

Trigger

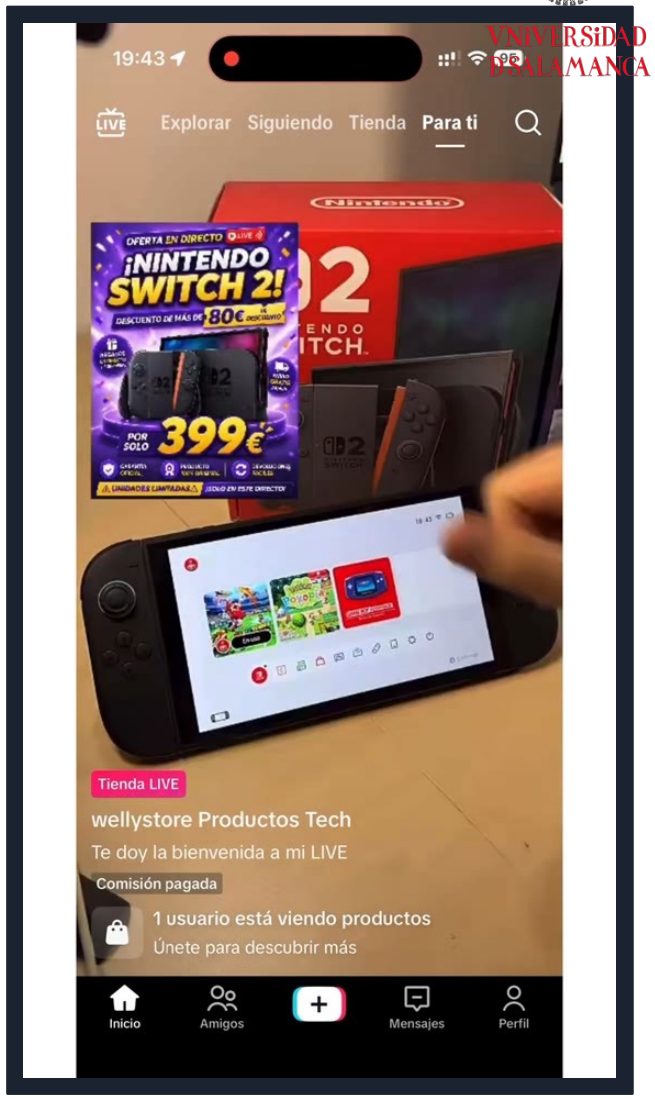
Sponsored posts and live shops share the format and gestures of organic content; the tap that advances Stories sits where the ad's call to action is.

Why it manipulates

Users struggle to tell social content from commercial content and end up on shops unintentionally.

Legal hook

DSA Arts. 26 and 39 (ad labelling and transparency); UCPD misleading omission when the commercial intent is unclear.



Clip · TikTok mobile app, sponsored content and live shop

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PATTERN 04

In-app browser

Stirring · Hidden in plain sight

TikTok mobile app

Trigger

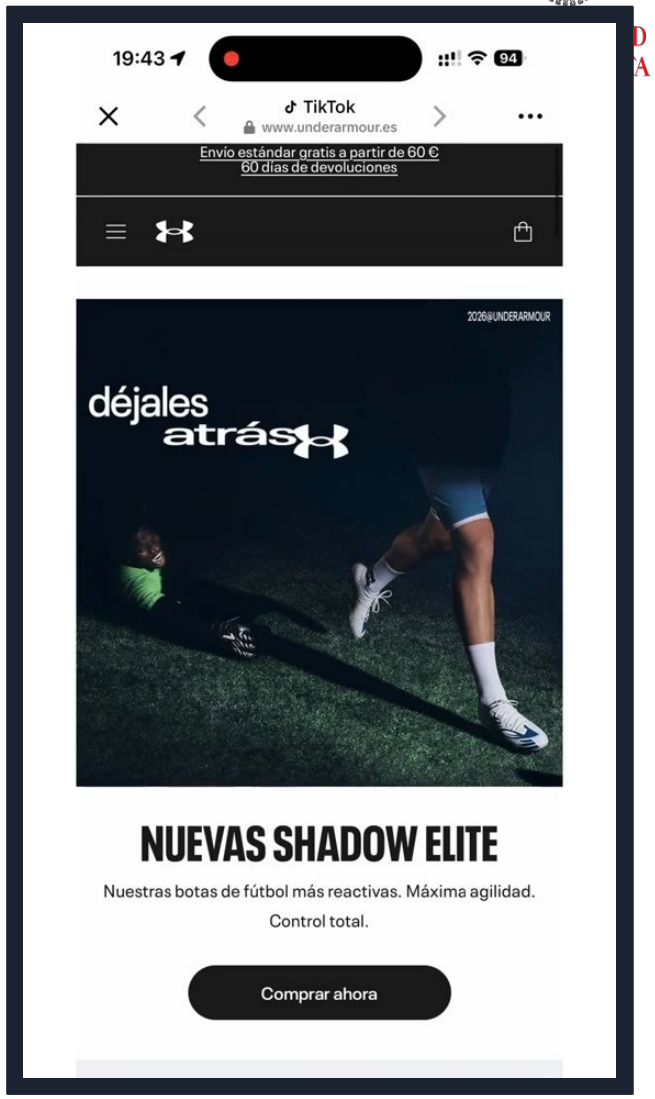
Tapping an external link opens the site inside TikTok's own browser instead of the device's browser.

Why it manipulates

Users believe they have left the platform while their browsing on third-party sites stays inside the app's environment.

Legal hook

GDPR transparency (Arts. 5(1)(a), 12–13); UCPD misleading omission about where navigation happens.



Clip · TikTok mobile app, external link from an ad

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PATTERN 05

Asymmetric cookie banners

Stirring · Hidden in plain sight + Skipping · Deceptive snugness

Instagram web · TikTok web

Trigger

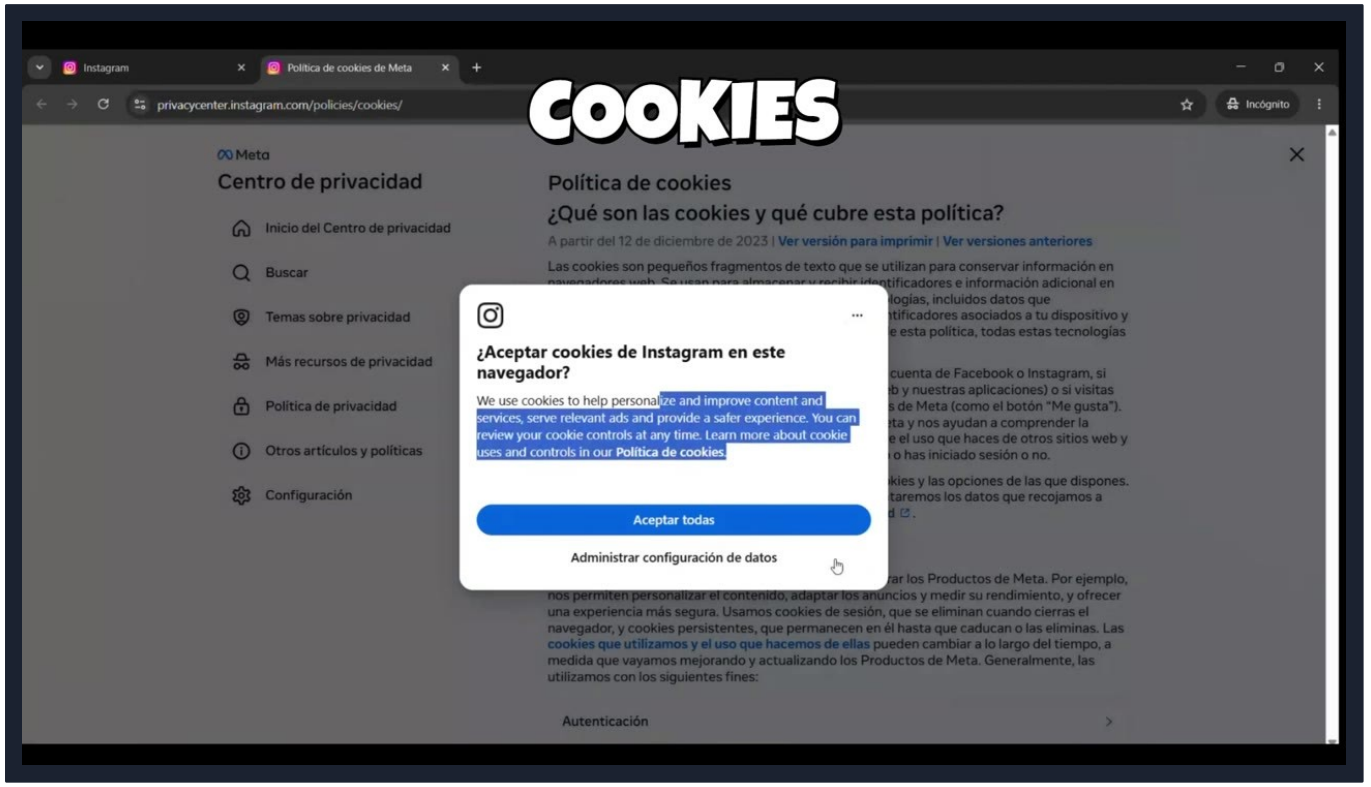
A blocking modal on first visit. "Allow all" is highlighted and placed first; rejecting is visually weaker, and TikTok offers no per-purpose choice.

Why it manipulates

Users pick the fastest way to remove the obstacle, which is also the choice that shares the most data.

Legal hook

GDPR Arts. 4(11) and 7 (free, specific consent) and ePrivacy/LSSI. Test: "click symmetry", rejecting as easy as accepting.



Clip · Instagram web, cookie consent dialogs

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PATTERN 06

Privacy maze in advertising settings

Overloading · Privacy maze + Skipping · Deceptive snugness

LinkedIn · Instagram (Meta Accounts Centre)

Trigger

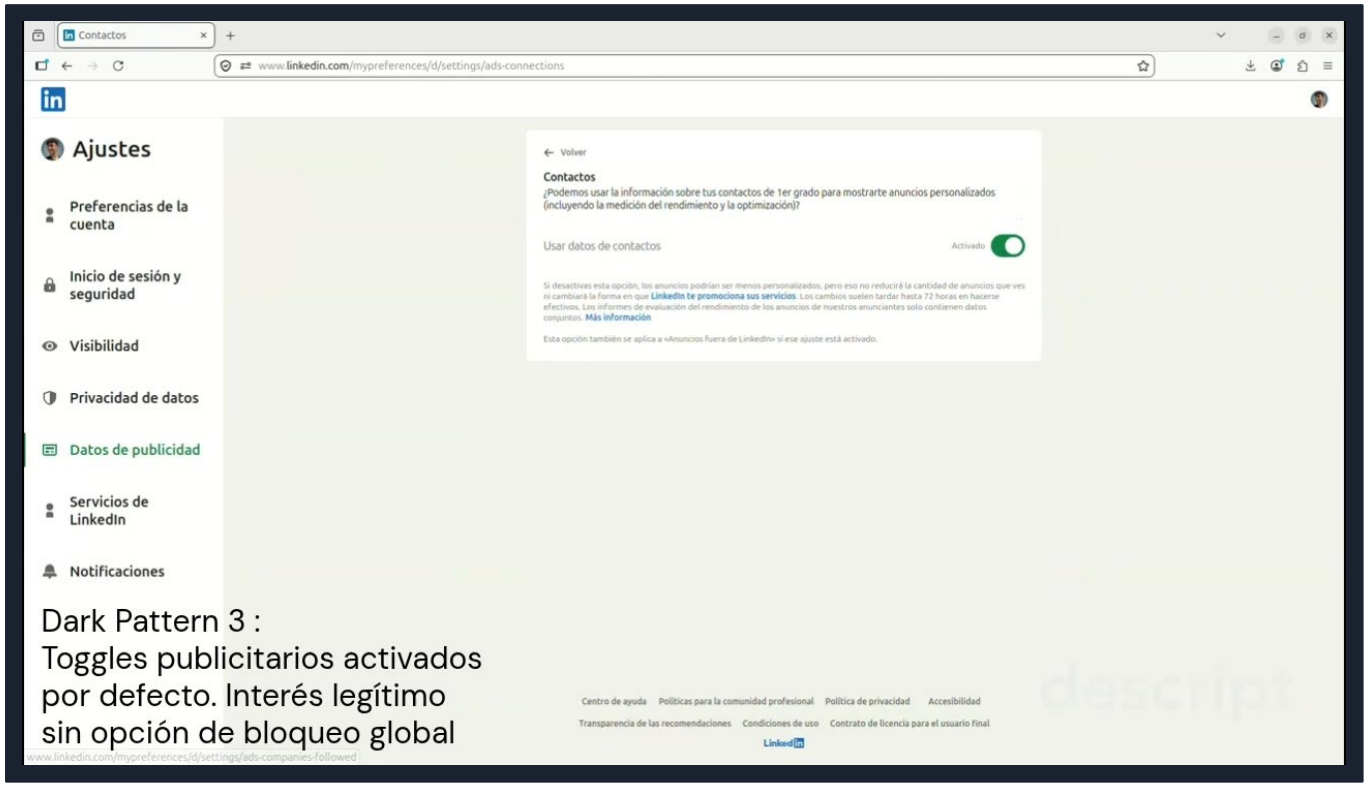
LinkedIn's "Advertising data" sits outside "Data privacy"; profile data is used under legitimate interest with no bulk opt-out, and other toggles are on by default.

Why it manipulates

Control exists on paper but is split into many rows and layers, so most users give up before changing anything.

Legal hook

GDPR Arts. 6(1)(f), 21 (right to object) and 25(2). The Irish DPC fined LinkedIn €310M in Oct 2024 over behavioural advertising.



Clip · LinkedIn web, "Advertising data" settings

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PATTERN 07

Obstructed account deletion

Obstructing · Longer than necessary + Stirring · Emotional steering

Instagram · LinkedIn

Trigger

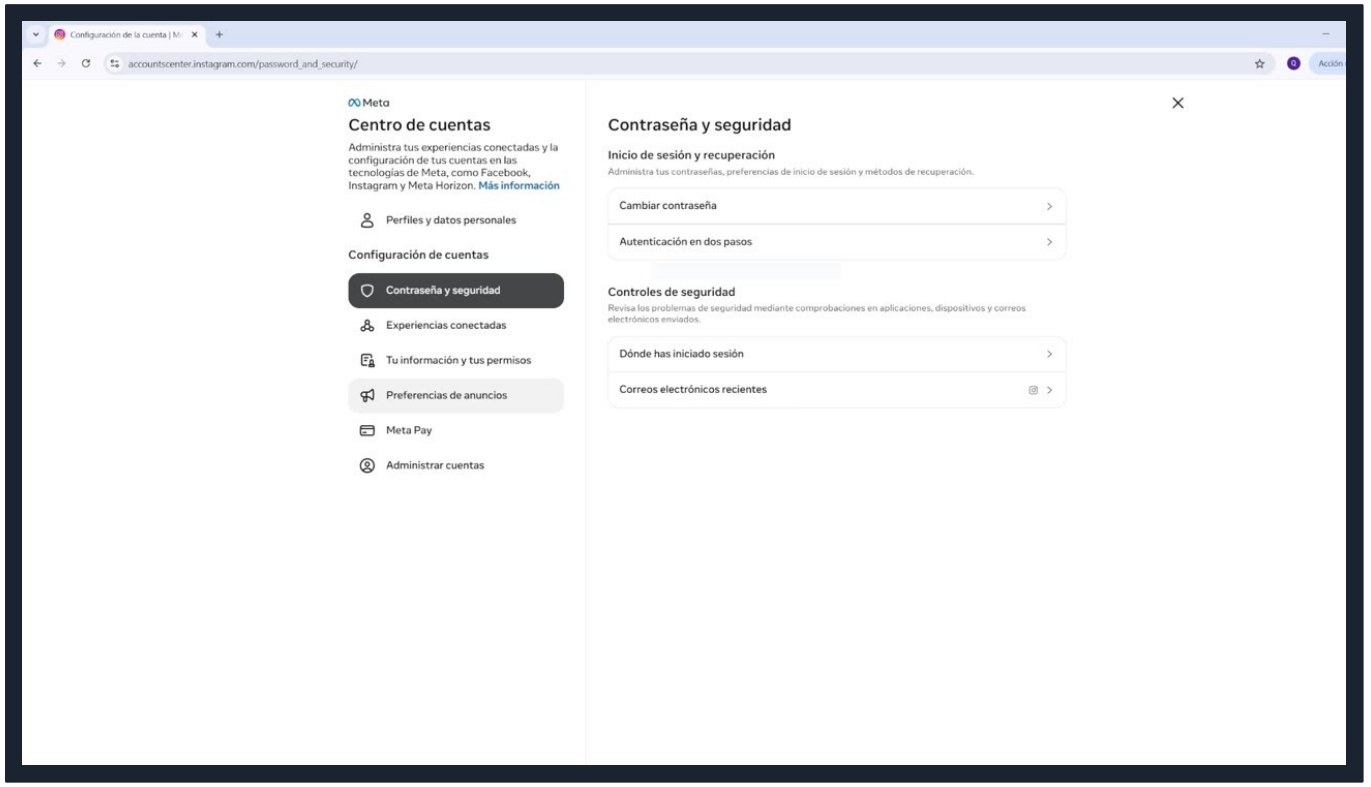
Instagram sends users to the Meta Accounts Centre, several layers deep. LinkedIn shows a guilt message and a mandatory exit survey before the password step.

Why it manipulates

Leaving costs more than joining: on LinkedIn, 3 steps to sign up versus at least 5 to close the account.

Legal hook

GDPR Arts. 12(2) and 17 (erasure without undue obstacles); DSA Art. 25; UCPD Art. 8 when emotional pressure is used.



Clip · Instagram web, path to delete the account

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PATTERN 08

FOMO and paywalled curiosity

Stirring · Emotional steering

LinkedIn

Trigger

"Who viewed your profile" shows blurred visitors. A pop-up offers Premium "for €0"; the plan screen preselects a "Recommended" plan and anchors on the annual price.

Why it manipulates

The platform withholds information it already has to turn social curiosity into subscriptions.

Legal hook

DSA Art. 25 (exploiting cognitive biases); UCPD Arts. 8–9 (undue influence).



Clip · LinkedIn web, Premium upsell flow

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PATTERN 09

Nagging and interruptive walls

Overloading · Continuous prompting

TikTok web · Instagram (emails, red badges, profile prompts)

Trigger

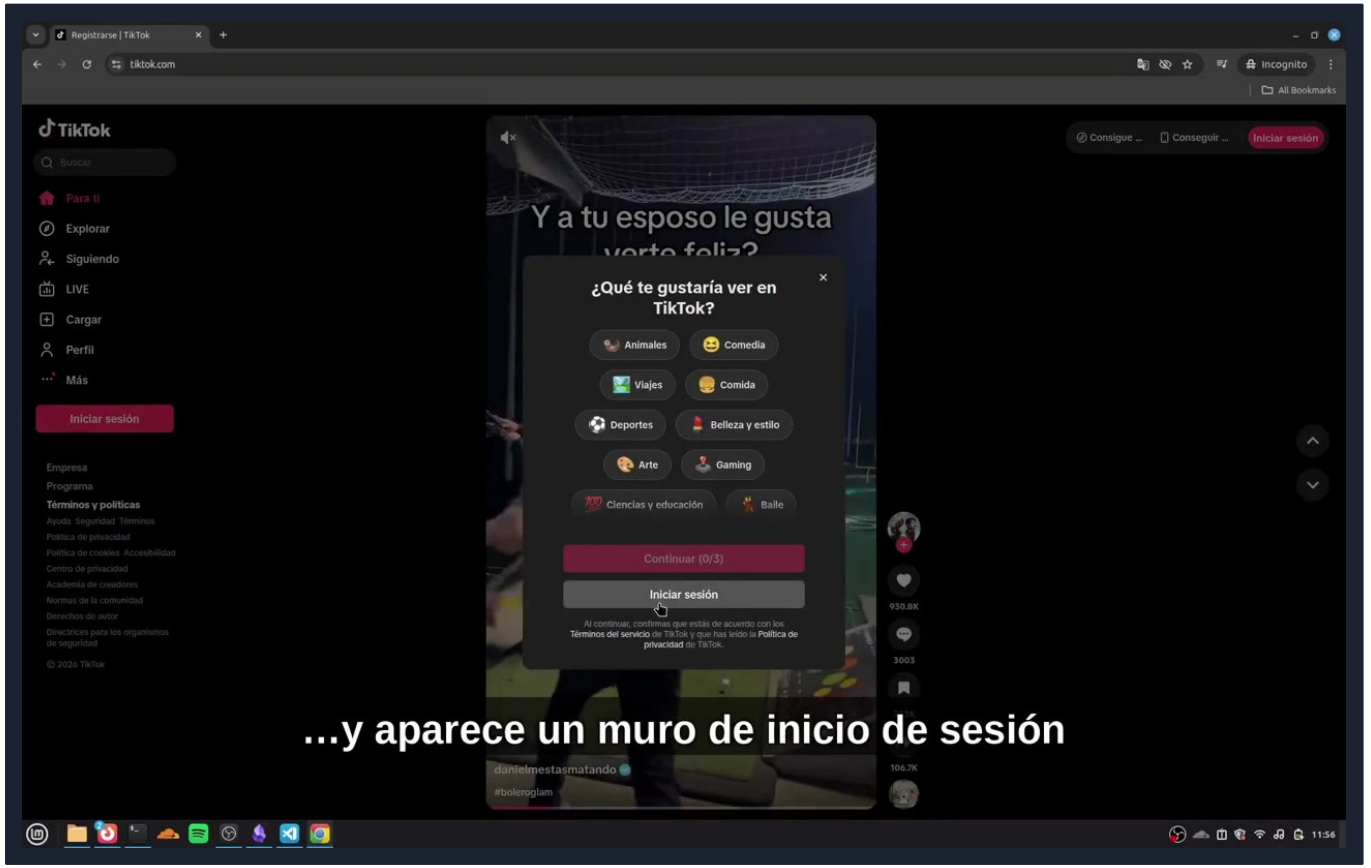
After about 30 s of scrolling TikTok web raises a login wall; its main button needs 3 interests picked first and the close icon is visually subordinate.

Why it manipulates

Repeated prompts wear users down until they register, give data (e.g. a phone number) or come back to the app.

Legal hook

GDPR data minimisation, Art. 5(1)(c); UCPD aggressive practices (Arts. 8–9) when pressure is persistent.



Clip · TikTok web, login wall (captions by the student team, in Spanish)

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PATTERN 10

A paid badge that looks like verification

Left in the dark · Conflicting information

X (formerly Twitter)

Trigger

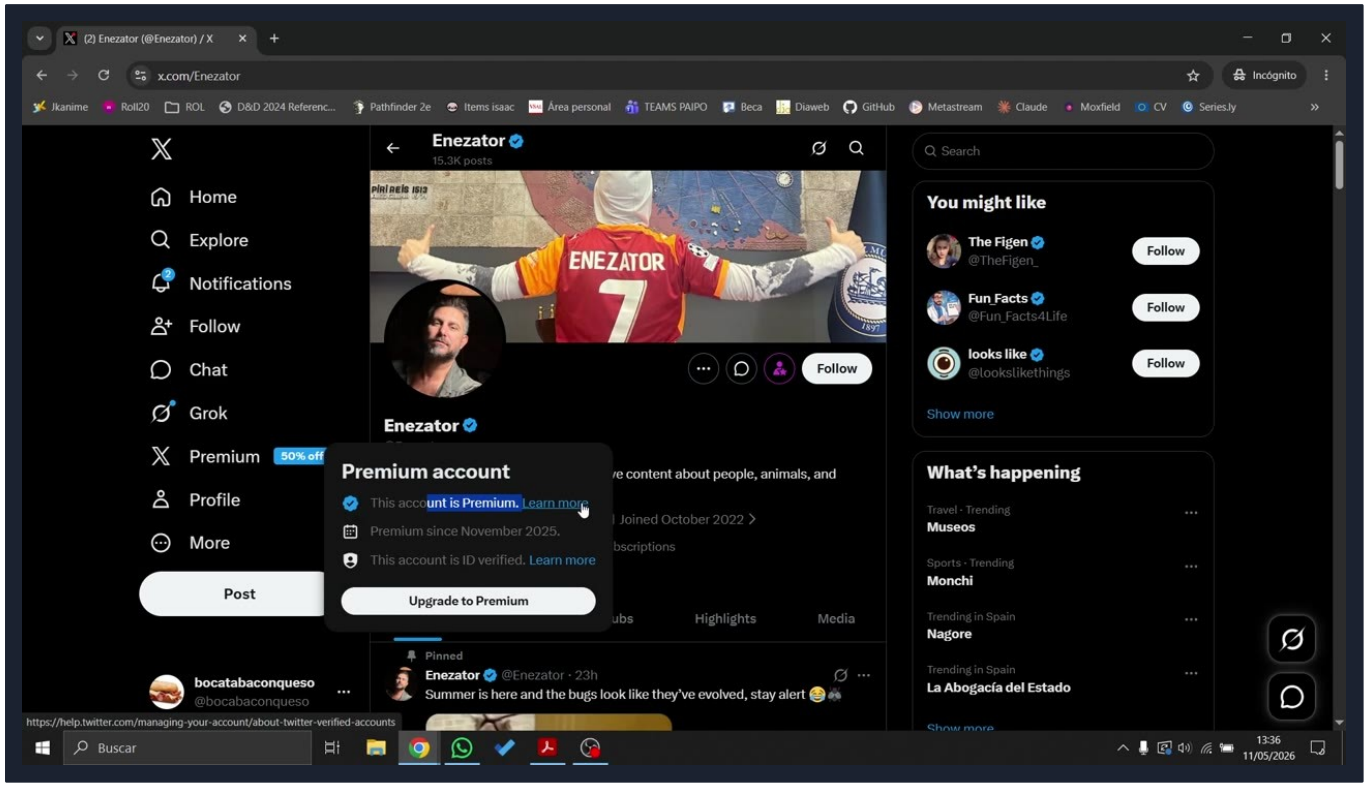
The blue check that once meant "verified identity" is now obtained by paying for Premium, with the same visual symbol.

Why it manipulates

Users keep reading the old meaning and trust accounts that may be impersonating others.

Legal hook

DSA Art. 25. In Dec 2025 the European Commission fined X €120M in its first DSA non-compliance decision.



Clip · X web, Premium account pop-up

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Three lessons

1

Patterns stack

On TikTok web, three EDPB types overlap on the same strip of screen. Harm comes from combinations, not isolated screens.

2

The feed and the exit matter most

Students expected the cookie banner; the most serious findings were in infinite feeds and in leaving the platform.

3

Cost symmetry as a test

The privacy-respecting option must cost the same clicks, size and visual weight as the one that sacrifices privacy.

Evidence: audits by eight student teams, MSc in Computer Engineering, University of Salamanca, 2025–26 · Clips are silent excerpts of their screen recordings

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