No. 23-2969

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NETCHOICE, LLC,
Plaintiff-Appellee,

v.

ROB BONTA, ATTORNEY GENERAL OF THE STATE OF CALIFORNIA,
Defendant-Appellant,

Appeal from the United States District Court for the Northern District of California, San Jose Division, No. 5:22-cv-08861-BLF, Hon. Beth Labson Freeman, Presiding

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BRIEF OF *AMICI CURIAE* DESIGN SCHOLARS IN SUPPORT OF DEFENDANT-APPELLANT

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INTEREST OF *AMICI CURIAE*

Amici are scholars who have published extensively on the First Amendment, regulation of addictive technologies, digital product design laws, and public and children's health in the digital age. They share an interest in this case because it presents important and novel questions concerning the intersection of the First Amendment, children's health and well-being, and laws regulating the design of digital products. A full listing of all Amici who join this brief appears at the end.[1] Amici are:

- **Micah L. Berman**, Stephen F. Loebs Professor in Health Services Management and Policy, College of Public Health; Professor of Law, Moritz College of Law, The Ohio State University
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- **Gaia Bernstein**, Technology, Privacy and Policy Professor of Law, Co-Director of the Institute for Privacy Protection, and Co-Director of the Gibbons Institute for Law Science and Technology, Seton Hall Law School
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[1] Both parties consent to the filing of this brief. No party or party's counsel authored this brief in whole or in part or contributed money intended to fund the preparation of this brief. Tech Justice Law Project plants to contribute money intended to fund preparing or submitting the brief.

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Amici join in this brief in their individual capacities, with institutional affiliations listed for identification purposes only.

INTRODUCTION

Amici submit this brief to discuss the proper legal framework for assessing Plaintiff Netchoice, LLC's ("Netchoice") First Amendment challenge to provisions of the California Age-Appropriate Design Code's ("AADC") regulating functional design characteristics of digital products like websites and social media platforms. Amici agree with Defendant that the District Court misapplied the applicable First Amendment principles when analyzing these provisions.

Netchoice argues that any regulation of digital product design is subject to strict First Amendment scrutiny. By Netchoice's logic, which the District Court accepted, functional design categorically implicates the First Amendment. In practice this would lead to invalidation of nearly all regulations touching the Internet or online products because strict scrutiny is exceedingly difficult to survive. But for a quarter-century, courts across the country at both the appellate and trial levels have upheld regulations of that character.

That is because digital product design provisions like those in the AADC target conduct, not speech. They are safety regulations, just like the regulations of the quality of paint in children's toys. They place guardrails on design features that stimulate or even actuate harmful conduct, such as addictive and compulsive behaviors, particularly those to which children are especially vulnerable. They are concerned with how much a person uses an interface and the built-in features that help a user find limits to their engagement. The AADC does not target, regulate, or discriminate between what is

expressed or who expresses it, and the regulations do not suppress or otherwise burden any particular message. Therefore, functional design regulations like the AADC—which Netchoice has not shown to have burdened *any* expressive activity—do not implicate the First Amendment.

Even if some aspects of digital product design regulation impact speech, any regulatory burden would at most constitute a content-neutral time, place, or manner restriction warranting intermediate scrutiny. The AADC would pass intermediate scrutiny because it furthers the California Legislature's compelling interest in protecting children from the serious health effects of addictive and other harmful online products while only imposing incidental and limited (if any) burdens.

Netchoice's invitation to adopt a sweeping rule applying strict First Amendment scrutiny to any digital product design regulation is fraught with legal and policy consequences. Such an unjustified and unsupported categorical rule would impair states' abilities to regulate addictive products—whether those products are digital like a social media platform or physical like a slot machine. These regulations have long been a central part of the traditional police power retained by the States under our constitutional system. Adopting the rule Netchoice proffers would rewrite this history and undercut states' authority to timely combat emerging threats to child health and well-being.

The Court should hold that digital product design regulations like those in the AADC do not implicate the First Amendment at all, absent some specific showing by

the challenger that the law targets or at least substantially burdens *bona fide* expressive activity. Alternatively, the Court could take a narrower route, instead focusing on how the AADC's design provisions regulate the time, place, or manner of expressive activity and remanding the case to apply intermediate scrutiny. This second approach would avoid adopting a broader constitutional rule as applied to digital product design regulations.

Either approach is superior to the mistaken analysis employed by the District Court. Amici urge the Court to reverse the District Court's decision incorrectly holding that the AADC's design provisions likely violate the First Amendment.

ARGUMENT

I. Laws regulating digital product design do not categorically implicate the First Amendment, and courts routinely uphold them.

We begin with the existing body of case law in the relevant area of First Amendment jurisprudence. That case law can be distilled into a clear principle: laws regulating digital product design do not categorically implicate the First Amendment and thus do not categorically trigger heightened First Amendment scrutiny. Nevertheless, this has not stopped online businesses like Netchoice from arguing otherwise and advocating for special First Amendment treatment of any regulations aimed at the functional design of online businesses. These challenges have been unsuccessful.

To date, courts applying the First Amendment to digital product design regulations have mostly done so in the context of assessing whether design code regulations impermissibly infringe expressive conduct. For decades, they have answered that question in the negative. These cases are illustrative because, like all components of digital product design architecture, design code determines the manner in which a digital product is presented to the world.

We begin with one of the earliest cases assessing the First Amendment's applicability to design code—this Court's decision in *Bernstein v. United States Department of Justice*, 176 F.3d 1132 (9th Cir.), *reh'g granted, opinion withdrawn*, 192 F.3d 1308 (9th Cir. 1999). To date, *Bernstein* is the only decision in which a court invalidated a regulation of digital product design inputs. But the decision made clear that its holding was narrow and simply cannot be interpreted as imposing heightened First Amendment scrutiny on digital software design regulations.

The *Bernstein* plaintiff designed a new encryption algorithm. *Id.* at 1135. He wrote and sought to publish a series of papers and instructions on his method, along with the source code, "within the academic and scientific communities." *Id.* at 1136. But State Department regulations placed strict limits on the "export" of encryption software, including computer code, and mandated that an individual wishing to share such code obtain a prepublication license. *Id.*

The panel invalidated these regulations, holding that they "allow[ed] the government to restrain speech indefinitely with no clear criteria for review" and chilled

scientists like the plaintiff from "engaging in valuable scientific expression." *Id.* at 1145. But the panel "emphasize[d] the narrowness of [its] First Amendment holding." *Id.* It explained, "We do not hold that all software is expressive," and indeed, "[m]uch of it surely is not." *Id.* But "the government's efforts [were] aimed at interdicting the flow of scientific *ideas* (whether expressed in source code or otherwise)." *Id.* (emphasis in original). In contrast, *Bernstein* explained, a law limiting the distribution of "encryption *products*" would have a merely "incidental effect on expression" and would therefore not be subject to the same degree of scrutiny. *Id.* (emphasis in original). Indeed, *Bernstein* explicitly rejected the idea that laws regulating design inputs—*e.g.*, "encryption products"—should receive strict scrutiny in cases where the "effect on expression" is "incidental." *Id.*

Since *Bernstein*, every court to consider similar arguments beyond the pleading stage has rejected the claim that special First Amendment strictures apply to code regulations, and every court has upheld the challenged regulations.[2] For example:

- Multiple courts have upheld laws limiting the dissemination of software designed to decrypt protected digital content.[3]

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[2] *See* Kyle Langvardt, *Crypto's First Amendment Hustle* 9-13, Yale J. L. & Tech. (forthcoming 2023) (cataloguing relevant cases).

[3] *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 434 (2d Cir. 2001), *United States v. Elcom Ltd.*, 203 F. Supp. 2d 1111, 1121 (N.D. Cal. 2002); *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, 307 F. Supp. 2d 1085, 1099 (N.D. Cal. 2004); *Green v. U.S. Dep't of Just.*, 392 F. Supp. 3d 68, 89-90 (D.D.C. 2019); *Green v. U.S. Dep't of Just.*, 54 F.4th 738, 745-47 (D.C. Cir. 2022).

- The Supreme Court of California upheld an injunction against dissemination of copyright protection decryption software.[4]
- A district court in this Circuit upheld an indictment stemming from the export of software that contained detailed technical data on a nuclear power plant to Iran.[5]
- The Second Circuit held that liability for failing to register with the Commodity Futures Trading Commission before marketing and selling stock advice algorithms to investors did not implicate the First Amendment.[6]
- The Fifth Circuit refused to enjoin the government from denying a gunmaker permission to publish files on the Internet used in the printing of 3D guns.[7]
- A Delaware district court denied an injunction sought by gunmakers of a law prohibiting the distribution of computer software used to make 3D guns.[8]

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[4] *DVD Copy Control Assn., Inc. v. Bunner*, 31 Cal. 4th 864, 871, 75 P.3d 1, 7 (2003), *as modified* (Oct. 15, 2003).
[5] *United States v. Alavi*, No. CR 07-429-PHX-NVW, 2008 WL 1989773, at 1 (D. Ariz. May 5, 2008).
[6] *Commodity Futures Trading Comm'n v. Vartuli*, 228 F.3d 94, 111 (2d Cir. 2000).
[7] *Def. Distributed v. U.S. Dep't of State*, 838 F.3d 451, 453 (5th Cir. 2016).
[8] *Rigby v. Jennings*, No. CV 21-1523 (MN), 2022 WL 4448220, at 10 (D. Del. Sept. 23, 2022).

To be clear, these decisions and others acknowledge that functional design inputs like code *may* be entitled to First Amendment protection where the regulation interferes with speakers' attempts to use them for expressive purposes. But none have accepted the far broader principle that design code regulations *categorically* implicate the First Amendment, and none have invalidated such regulations. *See, e.g.*, *DVD Copy Control Assn., Inc. v. Bunner*, 75 P.3d 1, 10-11 (Cal. 2003) (holding computer code and computer programs built therefrom "can merit First Amendment protection" but applying intermediate scrutiny to content-neutral government action that incidentally burdened sharing of such code).

The cases cited by Netchoice, the District Court, and Netchoice's amici in the trial court proceedings likewise do not support a categorical rule holding that laws regulating digital product design trigger heightened First Amendment.

In *Brown v. Entertainment Merchants Association*, which the District Court cited, the Supreme Court struck down a law banning the sale or rental of '"violent video games"' to minors, 564 U.S. 786, 789 (2011). Justice Scalia explained that video games "communicate ideas—and even social messages—through many familiar literary devices (such as characters, dialogue, plot, and music) and through features distinctive to the medium (such as the player's interaction with the virtual world)." *Id.* at 790. The statute sought to "create a wholly new category of content-based regulation" by targeting video games based on their content. *Id.* at 794. Thus, strict scrutiny applied, and the government failed to carry its burden to establish a compelling interest. *See id.*

at 799-801. *Brown* did not say or suggest that video game *design* is categorically expressive; it held only that the stories they tell are expressive.

Packingham v. North Carolina, 582 U.S. 98 (2017), which Netchoice cited multiple times in the trial court, is even further afield. There, Justice Kennedy remarked generally on online speech, referencing for example to the "vast democratic forums of the Internet." *Id.* at 104 (internal quotation marks omitted). Netchoice quoted some of these generalized statements multiple times in its preliminary injunction briefing, *see* Dist. Ct. ECF No. 29 at 2, 7, 8, and relied on *Packingham* for the proposition that the "First Amendment applies to laws affecting [the] internet," Dist. Ct. ECF No. 60 at 1. But context is crucial to understanding the import of these statements.

The challenged law in *Packingham* categorically and permanently banned registered sex offenders from accessing most social media platforms. 582 U.S. at 101. Justice Kennedy's discussion simply illustrated the statute's overbreadth and over-restrictiveness by analogizing to traditional public spaces. *See Packingham*, 582 U.S. at 105 (comparing the Internet to "quintessential for[a] for the exercise of First Amendment rights" like streets and parks). Like a hypothetical ban on registered sex offenders visiting all physical public spaces, the challenged law completely deprived its targets of "powerful mechanisms available to a private citizen to make his or her voice heard." *Id.* at 107. Thus, *Packingham* simply explained that social media does not deserve less protection than traditional speech fora.

Likewise, the Supreme Court's decision in *Sorrell v. IMS Health Inc.*, 564 U.S. 552 (2011), on which the District Court heavily relied, had nothing to do with functional design regulations. The District Court read *Sorrell* to hold that any law regulating "the 'availability and use' of information by some speakers but not others, and for some purposes but not others, is a regulation of protected expression." Dist. Ct. ECF No. 29 at 12 (quoting *Sorrell*, 564 U.S. at 570-71). *Sorrell* is narrower than that. The challenged law there targeted and restricted certain expressive uses of physician subscribing histories while allowing others; this had the effect of suppressing prescription drug marketing by pharmaceutical companies. *See id.* at 571. The Court made clear that the marketing messages—not the data, which was merely a design input for those messages—were protected speech, and it applied strict scrutiny because the law discriminated against one speaker's viewpoint. *See id.* ("[T]his case can be resolved even assuming . . . that prescriber-identifying information is a mere commodity."). Thus, *Sorrell* stands for the narrower, commonsense proposition that heightened scrutiny applies when a law places targeted restrictions on *who* says *what*.

In sum, since *Bernstein* was decided in 1999, no court to reach the merits has endorsed the notion that digital product design regulations automatically implicate the First Amendment or trigger strict First Amendment scrutiny, and no court to reach the merits has invalidated such a regulation.

The analytical framework in the above opinions tracks those in cases applying the First Amendment to architectural-design regulations. In *Burns v. Town of Palm Beach*,

a homeowner sought approval from the Town of Palm Beach's architectural review commission to tear down his beachfront mansion and build a new one "in the midcentury modern style," 999 F.3d 1317, 1322 (11th Cir. 2021), *cert. denied*, 142 S. Ct. 1361 (2022). The commission rejected the proposed home design, finding that it would be "excessively dissimilar to other homes within 200 feet in terms of its architecture, arrangement, mass, and size." *Id.*

The homeowner sued, arguing (among other things) that the criteria used by the commission violated his First Amendment expressive rights. *Id.* He took the position that "custom-designed residential architecture communicates a form of expressive conduct unique to the homeowner." *Id.* at 1335. In other words, he advocated for a categorical rule defining architectural design as expressive conduct and requiring application of heightened scrutiny to any regulation of it.

The Eleventh Circuit declined to decide "whether residential architecture can ever be expressive conduct protected by the First Amendment," but it rejected the homeowner's claim that residential architecture is *always* expressive. *Id.* at 1335-36. The court instead examined whether the challenged decision regulated conduct a reasonable person would interpret as expressive. *Id.* at 1336-37 (citing and quoting *Texas v. Johnson*, 491 U.S. 397, 404 (1989)). Examining the record before it, the court answered the question in the negative because the design features the homeowner cited as encapsulating an expressive message would not be visible to the public. *Id.* at 1337-43.

Moreover, the court held that even if those features could be seen by the public, "there still would be no great likelihood they would understand that it conveyed some sort of message." *Id.* at 1343. The court then comprehensively explained why, noting for example that there was also no evidence that the commission targeted "midcentury modern architecture" in its permitting decision or that the homeowner or the public had engaged in debate over such architecture which might have led to discrimination based on the homeowner's viewpoint. *Id.* Thus, the court held that "there was no great likelihood that some sort of message would be understood by those who viewed Burns's new beachfront mansion." *Id.* at 1322.

Other courts have applied the same framework to architectural design regulations. For example, in *Committee for Reasonable Regulation of Lake Tahoe v. Tahoe Regional Planning Agency*, a district court upheld aesthetic regulations of residential housing against a facial First Amendment challenge, 311 F. Supp. 2d 972, 1005 (D. Nev. 2004). The court declined to adopt a categorical rule that aesthetic elements of home design receive First Amendment protection and scrutiny, and instead found that while "rebuilds may involve an intent to convey an artistic, political, or self-expressive message, the great majority of remodeling or rebuilding projects involving residential housing are functional in nature and are not commonly associated with expression." *Id.*

In sum, these courts declined to adopt a categorical rule conferring First Amendment protections on architectural design regulations. Instead, like the courts in the above-discussed design code cases, they reviewed the record to determine whether

the challenger made a showing that the challenged action targeted or burdened *bona fide* expressive conduct. The answer was no, so the courts did not apply First Amendment scrutiny. This same analysis fits cases involving digital product design regulations like those in the AADC.

II. Digital product design regulations like those in the AADC do not implicate the First Amendment because they target functional design, not expressive activity.

The AADC contains a series of functional design provisions that prohibit companies from configuring their online platforms in ways that increase the risk of harm to children. These include provisions aimed at curbing functional design practices like "dark patterns" that encourage addictive behavior. For example, the AADC prohibits a "user interface designed or manipulated with the substantial effect of subverting or impairing user autonomy, decisionmaking, or choice, as further defined by regulation." AB 2273 § 1798.140(l). Such design features influence or deceive children into making certain harmful choices, such as engaging in compulsive or addictive behavior. *See, e.g.*, D.E. 51-5 (Radesky Decl.) ¶ 54 (explaining "dark patterns" are "design features that manipulate or nudge the user in a way that meets the technology developer's best interests – at the expense of the user's interests (i.e., time, money, sleep)").

A few examples of such design features include the "infinite scroll" feature on Twitter (or "X") that creates an endless stream of content such that, instead of creating an end to a page, continues to load as the user scrolls down the page, thereby

encouraging increased screen time; "autoplay" features on YouTube and TikTok that configure a platform to automatically play another video once the video chosen by the user ends; and push notification features on smartphone applications that induce a person to open and spend more time on an app. Digital product design regulations like the AADC's that regulate these design features do not target what is expressed on that interface; they do not try to govern who is saying what. Instead, the regulations target design features that serve the instrumental function of engineering user behavior. *See generally* Brett Frischmann & Evan Selinger, *Re-Engineering Humanity* (2018).

The conduct focus of functional design regulations can be illustrated by taking a closer look at design features that encourage addictive behavior. Many online businesses profit from prolonging user time on their platforms. Therefore, they design interfaces to addict users with techniques that prey on shared human vulnerabilities. These include our natural reactions to stimuli, the desire to be liked and social accepted, and the release of dopamine. *See* Gaia Bernstein, *Unwired: Gaining Control over Addictive Technologies* 35-38 (2023) (hereinafter, "*Unwired*") (canvassing addictive design features).

Design features like autoplay and infinite scrolling remove stopping cues that help users perceive how much time they have spent on a platform. When users scroll through newsfeeds on social media platforms, there is no natural cue to serve as a stopping point. Infinite scroll automatically repopulates the feed to encourage users to keep going for much longer than they might have intended. Likewise, autoplay

functions on video sites keep playing videos with no natural pausing point or break. These intentional design features manipulate our reactions to stimuli. *See id.* at 37-38.

Other design features leverage our desire for social acceptance and fear of missing out ("FOMO")—vulnerabilities to which minors are especially susceptible. To illustrate, Snapchat rewards users for "streaks" when they send messages back and forth with another user each day. Children view the continuation of a large number of streaks as a sign of popularity and make extraordinary efforts to extend them. *See id.* at 37.

Yet another type of design feature exploits the release of dopamine, the pleasure-enhancing neurotransmitter. Our brains release more dopamine when we receive an unexpected reward; along with other design features, this anticipated release of more dopamine is part of what makes pulling the lever on a slot machine so addictive. *See generally* Natasha Dow Schüll, *Addiction by Design: Machine Gambling in Las Vegas* (2012) (explaining how slot machine designers create unbroken, fast-moving gambling experiences that exploit the human vulnerability of anticipating a potential unexpected profit). Online businesses exploit this same human reaction with a variety of design features like push notifications that train the brain to repeatedly pick up the phone to find out if someone liked or commented on a post or photo and return to (and spend more time on) the platform. *See* Bernstein, *Unwired* at 35-36.

These features do not concern who speaks or what message is relayed. Rather, they concern the conditions in which a person uses digital products—the design characteristics that help determine how frequently they are accessed and the stopping

points built (or not built) into those products to protect against their overuse. When governments regulate such features, they do not discriminate against particular speakers or burden any particular message any more than when they regulate addictive devices like slot machines. *See, e.g.*, *There to Care, Inc. v. Comm'r of Indiana Dep't of Revenue*, 19 F.3d 1165, 1167 (7th Cir. 1994) (explaining that while statements promoting gambling are protected speech, gambling itself "has traditionally been closely regulated or even forbidden, without anyone suspecting that these restrictions violate the first amendment.").

III. At most, functional design regulations result in minimal, incidental impacts on expressive activity, and intermediate scrutiny would apply to such regulations.

As shown above, digital product design regulations do not implicate the First Amendment unless a challenger shows that such a regulation imposes some speaker or viewpoint discrimination or some burden on expressive activity. Netchoice has not shown that here. But the District Court skipped this crucial step: it did not find the AADC's design requirements would impose any selective speaker or content-based burden on protected expression.

At most, a design regulation could cause an incidental burden on expressive conduct. That has not been shown here, but even if it had been shown, intermediate scrutiny would apply because such a regulation would be a time, place, or manner restriction. A time, place, or manner restriction is a content-neutral limitation on when, where or how expressive activity is conveyed that is "designed to further significant

government interests." *Berger v. City of Seattle*, 512 F.3d 582, 604 (9th Cir. 2008), *on reh'g en banc*, 569 F.3d 1029 (9th Cir. 2009).

That jurisprudence works for a design regulation found to burden some form of expression.[9] For example, "time" and "space" restrictions can be used to draw lines between public and private activity in a shared space. In the physical world, regulations call for quiet at night or limit use of certain spaces by those who wish to communicate to ensure those spaces are shared with those who wish to use them for other purposes or with government speakers who use them to share official messages. And "manner" restrictions address the "how," the means by which the speaker of a message tries to secure the attention of an audience.[10]

In online spaces, time, place, and manner may be understood differently from their offline meanings, but they serve equally well as a system for governing shared resources for communication. In the digital world, "time" can often mean the length of time it takes to complete an action or see a result. As for "place," opportunities for communication are always limited in digital spheres, just as they are on streets and in public parks. As to "manner," tech companies and their engineers have built a variety of tools for new "manners" of expression. Regulations on how developers design these

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[9] *See generally* Brett M. Frischmann & Susan Benesch, *Friction-In-Design Regulation as 21st Century Time, Place, and Manner Restriction*, 25 Yale J.L. & Tech. 376 (2023) (positing that the Supreme Court's time, place, and manner framework fits digital product design regulations that burden expression).
[10] *See id.* at 428-33.

tools can thus fit within the Supreme Court's prior framework[11]—again, assuming for sake of argument that they burden any expressive activity at all (which has not been shown in this case). Thus, this court should recognize, for example, that prohibiting certain design features may at most impact the time and manner of speech flows in a virtual space, and it does so in a content-neutral fashion.[12]

Applying that framework here, even if the AADC's design provisions burdened some form of expression, they would survive the applicable standard of review. Courts apply intermediate scrutiny to content-neutral restrictions on speech. *Pac. Coast Horseshoeing Sch., Inc. v. Kirchmeyer*, 961 F.3d 1062, 1068 (9th Cir. 2020). Under intermediate scrutiny, a law does not violate the First Amendment if it "further[s] an important or substantial governmental interest" and the incidental burden(s) it imposes are "no greater than is essential to the furtherance of that interest." *Porter v. Martinez*, 68 F.4th 429, 443 (9th Cir. 2023) (internal quotation marks omitted).

Here, the California Legislature's interest—protecting children's health—is compelling. *See, e.g.*, *New York v. Ferber*, 458 U.S. 747, 756-57 (1982) ("It is evident beyond the need for elaboration that a State's interest in safeguarding the physical and psychological well-being of a minor is compelling.") (internal quotation marks omitted); *see also United States v. Yazzie*, 743 F.3d 1278, 1288 (9th Cir. 2014) (acknowledging child

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[11] *See* Frischmann & Benesch, *supra*, at 428-33.
[12] *See id.* at 444 (positing that regulation imposing frictions in interface design to disable infinite scrolling and enable user autonomy would qualify as content-neutral manner restrictions).

well-being is a compelling interest); *Prince v. Massachusetts*, 321 U.S. 158, 168 (1944) ("A democratic society rests, for its continuance, upon the healthy, well-rounded growth of young people into full maturity as citizens.").

On the other side of the ledger, neither Netchoice nor its amici have identified a situation in which the burden on expression imposed by the AADC's design provisions would be substantial or more than necessary to further California's interest. For example, in his District Court amicus brief, Professor Goldman asserted that design features may result in a "short time delay" to a user's access to a platform, which in turn could "drive many users away." Dist. Ct. ECF No. 34-1 at 5. Apart from being speculative and unshown by evidence in the record, even if credited, these marginal impacts would not lead to invalidation of the AADC on First Amendment grounds. All legal obligations raise an online company's operating costs in ways that could conceivably impact its ability to provide more content to users. Such laws are not automatically or even presumptively unconstitutional.[13]

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[13] *See Glickman v. Wileman Bros. & Elliott, Inc.*, 521 U.S. 457, 470 (1997) ("The fact that an economic regulation may indirectly lead to a reduction in a[n] . . . advertising budget does not itself amount to a restriction on speech."); *Arcara v. Cloud Books, Inc.*, 478 U.S. 697, 706 (1986) ("[E]very civil and criminal remedy imposes some conceivable burden on First Amendment protected activities."); *see also* A*m. Soc'y of Journalists & Authors, Inc. v. Bonta*, 15 F.4th 954, 962 (9th Cir. 2021), *cert. denied*, 142 S. Ct. 2870 (2022) (while an employee-classification test "may indeed impose greater costs on hiring entities" and thus reduce job opportunities for "speaking professionals," "such an indirect impact on speech does not necessarily rise to the level of a First Amendment violation").

In sum, an online business's desire to present its goods or services in the manner most advantageous to its business model does not trump the Legislature's interest in requiring a safer design format. "The First Amendment protects the right to express one's viewpoint, but it does not guarantee ideal conditions for doing so, since the individual's right to speech must always be balanced against the state's interest in regulating harmful conduct." *Clementine Co., LLC v. Adams*, 74 F.4th 77, 87 (2d Cir. 2023) (internal quotation marks omitted).

IV. The rule Netchoice seeks, and the District Court accepted, would infringe on the States' power to protect the health and wellbeing of children.

The AADC's design provisions are aimed at addictive design elements that may lead to serious health and quality of life consequences for children. *See, e.g.*, Dist. Ct. ECF No. 51-5 (Radesky Decl.) ¶¶ 45-71 (detailing the unique vulnerabilities of children in online spaces and the attendant risks of insufficient or non-existent design safeguards). Faced with emerging threats to children's health, states have long led the way in crafting responses, just as California is doing with the AADC. *See, e.g.*, Bernstein, *Unwired* 58-60, 78 (describing state efforts to confront the public health harms from adult and child smoking and child obesity). For example, California comprehensively regulates child gambling.[14] And multiple states moved more quickly than the federal

[14] *See, e.g.*, Cal. Gov't Code § 8880.52 (prohibiting lottery ticket sales to minors); *Id.* § 8880.321 (prohibiting the payment of prizes to minors); Cal. Penal Code § 326.5(e) (prohibiting minors from participating in any bingo game); Cal. Code Regs. tit. 4, § 1968 (prohibiting minors from wagering on horse racing).

government in adopting measures against the child vaping epidemic, including banning vaping on school property, prohibiting flavored products particularly attractive to children, and raising the legal age to use e-cigarettes from 18 to 21.[15]

These laws accord with the leading role the States (and state courts) have historically taken in protecting consumers from the worst effects of addictive products. *See, e.g.*, Bernstein, *Unwired* 47-78 (discussing state regulations of tobacco and junk food). States regulated alcohol, tobacco, and gambling well before the federal government stepped in.[16] They continue to adjust their laws (and judicial precedents) governing these products today. Recent measures include taxing addictive products to raise revenue for prevention and treatment programs.[17] Notably, these state laws include product design regulations, such as holding cigarette companies liable under state consumer protection laws for using design features that increase addictiveness. *See*

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[15] *See, e.g.*, Nandeeni Patel & Diana Quintero, *The youth vaping epidemic: Addressing the rise of e-cigarettes in schools*, Brookings Inst. (Nov. 22, 2019), https://www.brookings.edu/articles/the-youth-vaping-epidemic-addressing-the-rise-of-e-cigarettes-in-schools/.

[16] *See* Philip L. Hersch & Jeffry M. Netter, *State Prohibition of Alcohol: An Application of Diffusion Analysis to Regulation*, 12 RSCH. IN. L. & ECON. (1989) (surveying state alcohol laws before Prohibition); Rosalie Liccardo Pacula et al., *Developing public health regulations for marijuana: lessons from alcohol and tobacco*, 104 AM. J. PUB. HEALTH 1021, 1021 (discussing some early state regulations of alcohol and tobacco); Nelson Rose, *Gambling and the Law: The Third Wave of Legal Gambling*, 17 VILL. SPORTS & ENT. L.J. 361, 365 (2010) (chronicling historical gambling laws).

[17] Matthew B. Lawrence, *Public Health Law's Digital Frontier: Addictive Design, Section 230, and the Freedom of Speech*, J. Free Speech Law (forthcoming 2023).

United States v. Phillip Morris USA, Inc., 449 F. Supp. 2d 1, 39 (D.D.C. 2006) (discussing design methods used by cigarette companies to better "create and sustain addiction").

Courts have either held that these exercises of the police power are not subject to First Amendment scrutiny, or have upheld them when applying that scrutiny. To illustrate, video gambling machine operators have tried and failed in lower courts to invoke *Brown* in defense of "entertaining displays" that simulate slot machines.[18] A new rule for digital products would represent a departure from this jurisprudence and would affect states' efforts to temper harmful addictive design in the digital space, including through ongoing product liability litigation in state courts. *See, e.g.*, *Social Media Cases*, No. 22STCV21355, 2023 WL 6847378, at *1 (Cal. Super. Oct. 13, 2023) (ruling plaintiffs stated a viable state law claim for negligence in consolidated litigation brought by minors alleging they suffered an array of injuries from addiction to social media, which resulted from the platforms' "manipulative features" designed to "maximize the amount of time" spent on the platforms).

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[18] *See, e.g.*, *Telesweeps of Butler Valley, Inc. v. Kelly*, No. 3:12-CV-1374, 2012 WL 4839010, at *6 (M.D. Pa. Oct. 10, 2012), *aff'd sub nom. Telesweeps of Butler Valley, Inc. v. Attorney Gen. of Pa.*, 537 F. App'x 51 (3d Cir. 2013) ("Unlike in *Brown*, the simulated gambling programs at issue here do not contain plots, storylines, character development, or any elements that would communicate ideas."); *Hest Techs., Inc. v. State ex rel. Perdue*, 749 S.E.2d 429, 437 (N.C. 2012) (upholding ban on electronic machines that communicate sweepstakes through an "entertaining display"); *Alfarah v. City of Soledad*, No. 5:15-CV-05569-EJD, 2016 WL 3456697, at *5 (N.D. Cal. June 24, 2016) ("In general, playing or offering games is conduct, not speech.").

If digital product design regulations are treated differently, there is no limiting principle that would cabin such a sweeping rule to the facts before the Court. For example, if a social media platform or website's design features are treated the same as an artist's brushstroke, logic dictates that slot machines or video poker machines are also a form of protected "speech," and thus any regulation of their design features is subject to strict scrutiny. The same may be true of addictive devices like electronic cigarettes. By Netchoice's logic, states could not regulate the design features of such devices, which are purposefully designed to look "sleek" and have a stylish appearance.[19]

Netchoice seeks a departure from this history in the form of a rule requiring strict First Amendment scrutiny for all laws regulating the design of digital products and internet business platforms. It arrives at this through a three-step argument structure.

First, Netchoice overreads cases like *Brown* and *Packingham* to stand for the proposition that nearly all design regulations that affect the "use of data" are content-discriminatory. *See, e.g.*, Dist. Ct. ECF No. 60 at 3 (citing *Sorrell* for the proposition that "[r]egulating use of data to publish content regulates speech."). But product design has been data driven for more than a century—indeed, Henry Ford's groundbreaking

[19] *See* Ginia Bellafante, *Cool-Looking and Sweet, Juul Is a Vice Teens Can't Resist*, N.Y. Times (Feb. 16, 2018), https://www.nytimes.com/2018/02/16/nyregion/juul-teenagers-vaping-ecigarettes-dangers.html (discussing the appeal of a Juul device to adults and children alike because it is a "sleek" and "good-looking object" that resembles a flash drive offered "in colors seemingly inspired by the Farrow & Ball paint chart").

assembly line was a data-driven design. *See* Frischmann & Selinger, *Re-Engineering Humanity* 50-59, 102-46 (tracing history of data-driven design and relations to social engineering). The use of data in design did not revolutionize the First Amendment framework because "use of data" is not the operative factor under the First Amendment. What matters is whether a legal provision actually discriminates on the basis of content: traditionally, the subject matter or viewpoint of someone's speech.

Second, Netchoice and its amici characterize all regulations touching computers or the Internet as so destructive and burdensome that they threaten the continued functioning of the internet. *See, e.g.*, Dist. Ct. ECF No. 29 at 4 (claiming the AADC "attempts to censor the internet") (heading capitalization changed to sentence-style capitalization); Dist. Ct. ECF No. 34-1 at 10 (claiming the AADC "radically changes the Internet's architecture"); Dist. Ct. ECF No. 42-1 at 2 ("California's AADC poses a threat to the Internet's utility."). But as illustrated in this case, these claims are often speculative and unsupported by evidence in the record. More broadly, the Internet has proved to be extraordinarily adaptable, and countries like the United Kingdom have regulated digital product design without bringing about the prophesied doomsday scenarios. *See* D.E. 51-3 (Keany Decl.) ¶¶ 65-67 (detailing how online businesses have responded and adapted to the United Kingdom's Children's Code, upon which the AADC is modeled, and discussing data showing that only 29 percent of businesses incurred costs because of the Children's Code in 2022 and that "[v]ery few businesses find it difficult to conform with the Children's Code").

Third, Netchoice insists that the Court should dismiss any concerns about the harms of products marketed to children by online businesses as "mere conjecture," Dist. Ct. ECF No. 29 at 21 (internal quotation marks omitted). But the California Legislature made specific findings based on widespread consensus. It determined that "the impact of the design of online products and services on children's well-being has become a focus of significant concern," and "[t]here is bipartisan agreement at the international level, in both the United States and in the State of California, that more needs to be done to create a safer online space for children to learn, explore, and play." AB 2273 § 1(2), (3). These findings buttress the numerous studies documenting the harms posed to children by the digital product design features the AADC regulates.[20] *See Porter v. Martinez*, 68 F.4th 429, 446 (9th Cir. 2023) (a policymaking "history and consensus" in other jurisdictions "support[s] the State's asserted interest").

Additionally, the Legislature's duty is not just to remedy past harms; it must also act proactively to prevent them before they occur—particularly in a field like the digital world where technology evolves, and threats emerge, rapidly. "Sound policymaking often requires legislators to forecast future events and to anticipate the likely impact of these events based on deductions and inferences for which complete empirical support

[20] *See, e.g.*, U.S. Surgeon General's Advisory, *Social Media and Youth Mental Health* 6-12 (2023) (describing the documented harms of "compulsive or uncontrollable use" of social media and discussing research showing overuse of social media can lead to "changes in brain structure similar to changes seen in individuals with substance use or gambling addictions").

may be unavailable." *Turner Broad. Sys., Inc. v. F.C.C.*, 512 U.S. 622, 665 (1994). For that reason, "courts must accord substantial deference to the predictive judgments of Congress." *Id.*

All these principles are well-established and long predate the digital revolution. And as shown above, there is nothing inherent in digital products justifying a departure from the pre-existing legal framework. If courts apply strict First Amendment scrutiny to laws regulating the design of such products on the basis of a novel and unjustified "design is always speech" standard, such a rule would gravely impair states' power to vindicate public interests—including the interest in children's safety—in the twenty-first century.

V. The Court should reject Netchoice's ahistorical and unworkable First Amendment standard for functional design regulation.

There is a better path than the one paved by Netchoice and embarked on by the District Court. Specifically, the Court should rule that digital product design regulations do not implicate the First Amendment at all, absent some specific showing by the challenger that the law targets or at least substantially burdens *bona fide* expressive activity. Such a holding is a natural outgrowth of the precedents discussed above. And it would place laws regulating digital product design on equal footing with laws regulating physical products that could at times affect expressive activity.

This approach tracks *Sorrell*'s discussion of a law prohibiting a printer from buying ink or paper, which would trigger heightened scrutiny as a content-based burden

on print publication. *Sorrell*, 564 U.S. at 571. As in that hypothetical, if the challenger were to make a showing that a digital product design regulation *actually* targets expressive activity, strict scrutiny would apply. Otherwise, such regulations would not receive special and unwarranted First Amendment treatment.

Alternatively, the Court could hold that even if the AADC's design provisions burden expressive activity, the District Court mistakenly applied the wrong level of scrutiny and failed to sufficiently consider California's interest in protecting children's health. As discussed above, Netchoice has not shown the AADC's design provisions burden any expressive activity. But even if the AADC did impose such burdens, they would be incidental and constitute a content-neutral time, place, or manner restriction. As a result, intermediate scrutiny is the proper standard. The Court could therefore remand the case for fuller consideration under that scrutiny level. This narrower approach would not require this Court to articulate a categorical rule concerning the appropriate level of First Amendment scrutiny applied to digital product design regulations.

Amici urge the Court to adopt the first approach, but either avenue would avoid setting the novel, disruptive constitutional precedent invited by Netchoice and its amici.

CONCLUSION

This Court should reverse the District Court's grant of a preliminary injunction.

Dated: December 20, 2023 /s/ *Glenn E. Chappell*

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CERTIFICATE OF COMPLIANCE

I hereby certify that the attached brief is proportionately spaced, has a typeface of 14 points, uses font type Garamond, and complies with the word count limitations set forth in Circuit Rule 29-2(c)(3). This brief has 6,995 words, excluding the portions exempted by Federal Rule of Appellate Procedure 32, according to the word count feature of Microsoft Word used to generate this brief.

Dated: December 20, 2023

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CERTIFICATE OF SERVICE

I hereby certify that, on December 20, 2023, I filed the foregoing amicus brief in support of Defendant-Appellant with the Clerk of Court using the CM/ECF system for the United States Court of Appeals for the Ninth Circuit. I certify that all participants in the case are registered CM/ECF users, and that service will be accomplished by the appellate CM/ECF system.

Dated: December 20, 2023

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