

Judicial Determination and Multi-Legal Infringements of Compulsory Shake-to-Redirect Advertisements

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Abstract

Following China's 2021 regulation on traditional splash ads, compulsory shake-to-redirect ads have rapidly emerged, exploiting mobile sensors to force page redirects without genuine user consent. Existing research, however, lacks unified judicial determination criteria and systematic analysis of narrow judicial identification for ordinary users' lawsuits under the principle of no trial without a claim, leaving a notable gap in establishing a claim system tailored to such torts. Therefore, this study investigates three core issues: the legal definition of compulsory shake-to-redirect ads, their constitutive elements of infringement under multiple legal regimes, and the corresponding relief paths for aggrieved users. The study adopted a methodology of concept definition, typical case analysis, multi-domain legal evaluation, and comparative law perspectives. The findings reveal that user authorization, reasonableness of trigger thresholds, ad-block settings, and the provability of actual harm are key judicial determinants. This paper confirms that compulsory shake-to-redirect advertisements form a progressive infringement structure, breaching the Civil Code, the Consumer Rights and Interests Protection Law, and the Personal Information Protection Law (PIPL). Regarding remedies, it further proposes that users may assert alternative compensatory damages under claim concurrence and non-compensatory measures under claim accumulation. Theoretically, this study sorts out the applicable logic of multi-field norms and puts forward a three-layer infringement identification model for multi-domain legal qualification, filling the research gap in narrow judicial identification. Practically, it also provides references for judicial adjudication and user litigation, ultimately promoting a healthier mobile application ecosystem.

Keywords

compulsory shake-to-redirect advertisements, judicial determination, infringement, concurrence of claims, accumulation of claims

1. Introduction

After the Ministry of Industry and Information Technology of China regulated traditional splash ads in 2021, compulsory shake-to-redirect advertisements emerged rapidly and became mainstream in the industry [1]. Using mobile sensor technology, these ads implement forced redirects under the guise of interactive engagement and have been widely adopted across various applications [2]. To enhance advertising conversion rates, platforms generally increase trigger sensitivity, which leads to non-consensual redirects triggered by users' minor daily movements, essentially constituting forced harassment [3]. Such practices have generated

substantial public discontent and complaints. In addition, platforms such as Weibo and Meitu XiuXiu have been exposed or sued for related infringements [4]. Although regulators have issued technical parameter standards, platforms' extensive circumvention of regulation remains prevalent. The disorder of compulsory redirect remains severe, seriously infringing on users' legitimate rights and interests [5]. Although China's current Advertising Law and Anti-Unfair Competition Law regulate illegal advertising and traffic hijacking, with administrative regulation and inter-platform litigation available, ordinary users remain in a passive position [1]. Due to insignificant individual harm, the difficulty of producing evidence, and fragmented legal bases, users are generally reluctant to bear litigation costs [6]. Such cases have a limited number of judgments and lack guiding precedents, with inconsistent judicial identification criteria [3,7]. Judicial practice also has apparent ambiguities in fact-finding and legal application, which bring several specific dilemmas. In general, existing studies lack research on narrow judicial identification for ordinary users' lawsuits under the principle of no trial without a claim, failing to systematically analyze remedies and how rights loss is concretely manifested, resulting in a specific research gap. This paper mainly studies three issues. The first is at the fact-finding level to define compulsory shake-to-redirect ads in the field of law. The second is at the legal evaluation level to discuss the constitutive elements of infringement of such conduct under the Civil Code, the Consumer Rights and Interests Protection Law, and the PIPL, and then propose an infringement identification method. The third is at the relief path level to analyse the rules for handling concurrence or accumulation of claims under multi-jurisdictional liabilities, the order of legal application, and the strategies for users to seek remedies. Following the logical structure of concept definition, typical case analysis, multi-domain legal evaluation and relief, and reference to extraterritorial experiences, this paper aims to clarify the judicial identification criteria and legal application rules of compulsory shake-to-redirect ads, so as to provide theoretical references and practical guidance for judicial adjudication and users' litigation for rights protection.

2. Technical Basis and Legal Definition of Compulsory Shake-to-Redirect Advertisements

2.1 Technical Mechanism of Sensor-Based Advertising Triggers

Using the built-in gyroscope and acceleration module, the acceleration sensor of a mobile device collects real-time motion parameters such as shaking and tilting, and converts them into electrical signals to provide underlying data for interactive triggering [5]. As the mainstream implementation of interactive advertising, H5 technology can directly access the device's sensor interface and fast effectuate page redirect [2]. Combining these two, the H5 advertisement page continuously monitors sensor data, and once the preset threshold is reached, it initiates the automatic redirect mechanism of shake-to-redirect ads [7].

2.2 Concept Definition of Compulsory Shake-to-Redirect Advertisements

Shake-to-redirect advertisements refer to a type of interactive advertisement. In this format, mobile apps access the phone's gyroscope and acceleration sensors during the startup phase. They then automatically trigger redirects to advertisement pages or third-party applications based on detected device movements, all without the user's explicit consent [4,5,7].

2.2.1 Interactive Splash Ads

Interactive splash ads are displayed and triggered through interactive operations such as shaking, swiping, and tapping on mobile app splash screens, representing an important category of mobile internet interactive advertising [1]. Triggered by interface operations, these ads rely on sensors and interactive design to achieve redirect, becoming a mainstream commercial form in current splash advertising [4,5].

2.2.2 Sensor Data Processing and Legal Implications

In sensor-triggered interaction, mobile applications employ built-in components such as gyroscopes and accelerometers in splash ads to capture real-time motion data, including shaking and tilting. They then automatically trigger an ad redirect based on preset parameters [5,8]. This technology realizes triggers by continuously reading sensor data without requiring any manual tap [9]. As it collects and processes motion data that can be linked to specific users, such interaction involves personal information processing and raises legal concerns regarding legitimacy and privacy protection [7,10].

2.2.3 Forced Redirect

Legally, consent refers to the true and explicit intention expressed by users with full knowledge, free will, and without coercion, which is the core element of a civil legal act [3]. Forced redirect refers to a situation where an app page jumps to other advertising or third-party pages without asking users for formal permission to obtain their genuine intention and explicit authorization, or even contrary to their will [5,10]. This redirect is not actively chosen by users and cannot reflect their real autonomous decision [7,11].

3. Judicial Practice and Logical Analysis

3.1 Typical Cases and Judicial Outcomes

3.1.1 Zhang v. Meitu XiuxiuIn

In 2023, Zhang was redirected to external platforms unwillingly and repeatedly by Meitu Xiuxiu's shake-to-redirect ads during daily movements such as walking. This severely interfered with her use. She sued the operating company [11]. The court determined that the platform's unreasonably low motion-triggering parameters frequently led to unintended redirects and unnecessary data consumption against the user's will, constituting forced redirect and infringing Zhang's right to privacy of peaceful life, property rights, and consumer choice [10]. It also unlawfully collected and processed sensor data without valid consent [7]. The court ordered the defendant to stop the infringing conduct within seven days, raise the trigger threshold to a rotation angle of at least 35 degrees and a duration of no less than 3 seconds, and pay 1 yuan in damages for data loss [11,12].

3.1.2 Zhang v. Baidu Tieba

In a similar case, Zhang requested the court to order Baidu Tieba to disable the motion-based ad function, stop accessing mobile sensors, and pay 1 yuan for mobile data loss. Before the court issued its ruling, however, Baidu Tieba had already added a close button to the function. The court ruled that the user's acceleration data constitutes personal information due to its identifiability. Baidu Tieba infringed on personal information rights and interests by failing to obtain explicit and informed consent or provide a clear disable function. The data in question only reflected the user's movement status and did not qualify as private information, so no privacy infringement was established. Since no actual harm was proven, the compensation claim was dismissed [12].

3.2 Consensus and Divergence in Judicial Reasoning

Courts consistently confirmed that user-associated sensor data constitutes personal information, requiring explicit consent and sufficient notification under the PIPL; a mere close button does not eliminate the coercive nature of redirects. The difference is that in the Meitu Xiuxiu case, the court found an infringement of the right of free choice and property rights due to unreasonable trigger parameters and easy accidental triggering in daily use, and ordered adjustment of the parameters and compensation for data traffic losses; in the Baidu Tieba case, the plaintiff had no evidence to prove unusually easy accidental triggering or additional traffic consumption, and the defendant had made rectification during litigation, so the claims for compensation and cessation of infringement were dismissed. These cases suggest that judicial determination hinges on four thresholds: user authorization for information processing, the reasonableness of the technical trigger, settings to block advertisements, and the provability of actual harm. The difficulties in adjudicating such cases focus on three aspects. First, harmful consequences are hard to define: losses of mobile data and indirect losses, such as expected interests, lack clear calculation criteria, and mental damage can rarely be supported, as they do not meet the standard of privacy infringement [11]. Second, the burden of proof is unfairly allocated: plaintiffs face great difficulty in proving technical facts such as the reasonableness of trigger thresholds, while defendants monopolize core technical data and operating parameters. Third, the principle of technological neutrality is misused: platforms package open system permissions into the practice of technological neutrality to evade liability. Judges must draw a clear boundary between technically accessible data and legally collectible information, so they frequently confront difficulties in factual finding and liability discretion when balancing technological innovation, business freedom, and user rights [12].

4. Multi-Domain Legal Qualification and Normative Coordination

4.1 Identification of Infringements in Multiple Legal Domains

4.1.1 Civil Rights Violations under the Civil Code

The Civil Code primarily protects citizens' personal rights and property rights. On personal rights, the Personality Rights Book explicitly includes tranquility of private life within the scope of the right to privacy [13-16]. Shake-to-redirect ads disrupt normal usage and cause negative emotions, infringing upon the right to privacy of peaceful life [9,17]. Furthermore, overly sensitive redirects unreasonably restrict users' actions, amounting to disguised coercion and technical bullying, which violates the independent exercise of civil rights and infringes on the right to personal freedom [2,7]. On property rights, accidental redirects load large amounts of pictures and videos, consuming mobile data, a new form of property, without prior notice [3,10]. Such acts meet the four elements of tort liability: unlawful conduct, harmful consequence, causal link, and subjective fault. For profit, platforms intentionally set sensitive parameters, forcing redirects without consent, leading to disruption and mobile data waste with direct causation [1,3]. Despite different research perspectives, scholars generally concur that shake-to-redirect ads constitute invasive and coercive civil torts, based on the two broad categories of rights in the Civil Code.

4.1.2 Consumer Rights Violations under the Consumer Rights and Interests Protection Law

With regard to the right of free choice, shake-to-redirect ads set overly sensitive triggers via gyroscopes and accelerometers, forcing redirects when users walk, ride vehicles, or just hold phones normally. This effectively deprives users of control and directly infringes their right of free choice, while such ads further violate this right by demanding that users keep their phones still to avoid redirects and thus imposing excessive obligations on them [3,5,10,11]. In the field of the right to fair trade, platforms often abuse their dominant positions when collecting sensor data without complete informed consent, weakening the fairness of online services [1,11]. Scholars disagree on the infringement threshold: some emphasize explicit user consent [10], while others argue that unreasonable triggers still should be qualified as infringement even with consent [3,7]. They also differ on how the two rights interact. Nevertheless, there is consensus that platforms' profit-driven technical control violates the principles of voluntariness, equality, and fairness [14,15].

4.1.3 Personal Information Rights Violations under the PIPL

Sensor data from accelerometers and gyroscopes reflects users' movements and can be associated with identifiable individuals, qualified as personal information under Article 4 of the PIPL [8,13]. Collecting such data is unnecessary for core functions and obviously surpasses the requisite scope, constituting excessive data collection [1,3]. Platforms frequently rely on hidden notices, implied consent, or forced authorization in lengthy privacy policies to deny users the right to refuse and decide [3,10,11]. There has been an academic consensus on these issues. Disagreements concentrate on regulatory paths and liability reasoning: some identify illegality through tort elements [7]; others stress invalid standard clauses and breached notification duties [3,11].

4.2 Coordination of Legal Norms

4.2.1 Multi-Domain Collaborative Infringement Identification Model

In regulating compulsory shake-to-redirect ads, the Civil Code, the Consumer Rights and Interests Protection Law, and the PIPL form a layered and progressive framework. The Civil Code defines tort elements based on personal rights and property rights [10,16]. The Consumer Rights and Interests Protection Law identifies infringements of consumers' rights to know and choose in consumption scenarios [3]. The PIPL sets compliance boundaries for sensor data collection, informed consent, and necessity requirements [3,10]. Accordingly, this paper proposes a three-layer progressive infringement identification model. The Civil Code provides the broadest general protection as a safeguard for fundamental civil rights; the Consumer Rights and Interests Protection Law further delineates specific rights when using platform services as a consumer; and the PIPL precisely addresses infringements in unlawful data collection and application. This model clarifies how the three legal regimes jointly determine the infringed rights in compulsory shake-to-redirect ads.

4.2.2 Forms of Claim Rights and Litigation Relief Strategies

Users may assert multiple claims under the three legal regimes for the same shake-to-redirect conduct. Depending on the remedial purpose, these claims exhibit both concurrence and accumulation. Concurrence of claims applies to compensatory damages. The three laws each provide a basis for claiming economic losses. Because these claims serve the same remedial purpose, the plaintiff must choose the most favorable legal basis and cannot recover duplicate damages. Accumulation of claims applies to distinct remedial measures. Under the Civil Code, aggrieved users may seek to have the infringing conduct cease [10]. Under the Consumer Rights and Interests Protection Law, users may demand an apology for the infringement of the right of free choice and the right to know [7]. Under the PIPL, users may request deletion of improperly collected sensor data [7,10]. These claims serve different purposes, such as preventive, remedial, and compliance ones, without inconsistency, permitting combined assertion for full relief [7,10]. Thus, users can adopt a dual strategy: select the strongest compensatory claim while concurrently pursuing all non-compensatory remedies. This approach respects the doctrinal distinction between concurrence and accumulation while maximizing user compensation and relief [7]. After clarifying the substantive rules governing the concurrence and accumulation of claims, it is further necessary to sort out the applicable order of legal provisions, so as to establish a clear and stable hierarchical claim strategy for users in litigation. Following the principle that special law prevails over general law, users may assert platforms' violation of the Consumer Rights and Interests Protection Law, which offers lower evidentiary hurdles. Meanwhile, users may challenge the unauthorized collection of sensor data and illegal access to device permissions under the PIPL. As a fallback, users may claim violation of personality rights such as the right to privacy of peaceful life and freedom, as well as property rights reflected in data losses in the field of civil law. With respect to the internal boundaries, private information embedded in personal information shall first be governed by the privacy rules of the Civil Code [16]. In the event of conflicts or overlaps among legal norms, the pro-consumer principle applies, and the norm that provides stronger protection for users' rights shall be adopted [6]. Procedurally, users may also seek reversal of the burden of proof, compensation for reasonable expenses, and even pursue enhanced remedies through consumer public interest litigation [3,7].

5. Comparative Law Perspectives and Regulatory Implications

5.1 Theoretical Research

Commercial harassment doctrine defines commercial acts that infringe personal tranquility and market order as unreasonable nuisances with a dual nature of personality infringement and unfair competition [17]. Germany first incorporated this theory into its regulatory system under the Act against Unfair Competition, explicitly prohibiting unauthorized intrusive commercial practices and granting groups the opportunities to pursue protection and claim disgorgement of illegal profits, which aids in identifying such ads as unlawful nuisance conduct [17]. The US regulates such ads via special legislation and heavy penalties [17]. Relevant research in China is limited and remains at the theoretical introduction stage without judicial or regulatory application [17]. This theory can provide criteria for illegality judgment and help improve competition law regulation for such ads [17].

5.2 Legislative Models

The US, Europe, Japan, and South Korea have established an integrated legislative framework that covers internet advertising regulation, personal information protection, and consumer rights protection. Through clear provisions, these systems forbid commercial harassment, unauthorised data collection, and compulsory behavioural triggers. The US follows a decentralized approach to special legislation, with federal and state laws including the Internet Anti-Tracking Act and the Ad Plug-in Act. Apart from these, the California Consumer Privacy Act also provides statutory damages for personal information breaches [3,18]. Under the GDPR, the EU enforces rigorous data protection accompanied by severe penalties, while the Unfair Commercial Practices Directive governs misleading advertising [3]. Japan implements refined supporting legislation and unified supervision by the Consumer Affairs Agency [19]. There are two paradigms existing. France and Germany insist on prohibition in principle with explicit consent: no intrusive ads without user permission. The US and Japan apply permission in principle with strict restrictions, setting rules on triggers, sensitivity, and close buttons [6]. All abide by notice-consent, data minimization, and prohibition of

compulsory triggers, consistent with China's laws, yielding direct implications for regulating compulsory shake-to-redirect ads.

5.3 Judicial Practice

Foreign judicial practice regarding forced-trigger ads and malicious pop-ups has developed a mature method that prioritizes user rights, technical regulation, reversed burden of proof, and public interest litigation. This method can assist in addressing regulatory predicaments about domestic shake-to-redirect ads. The institution named FTC actively prosecutes unfair advertisements, protecting users' choice [15,20]. Heavy penalties are determined by German courts to govern unauthorized pop-ups [6]. Japan applies the presumption of fault to ease consumers' burden of proof [3]. The US provides a safe harbor for platforms under Section 230 of the Communications Decency Act [6]. Germany and the US employ public interest litigation [4]. Thus, China should lower the barriers to proof, reverse the burden of proof, increase penalties, regulate the use of sensor triggers, and take full advantage of public interest litigation.

6. Conclusions and Recommendations

This study adopts a research approach based on concept definition, case analysis, multi-jurisdictional argumentation, and extraterritorial reference, focusing on three core issues of compulsory shake-to-redirect ads: factual identification, infringement constitution, and remedy paths. It aims to fill the research gap in judicial determination in the narrow sense, resolve difficulties in judicial adjudication and user rights protection. The study shows that user authorization, reasonableness of trigger thresholds, ad-block settings, and provability of actual harm are key elements in judging forced redirects. Such conduct simultaneously violates the Civil Code, the Consumer Rights and Interests Protection Law, and the PIPL, giving rise to a progressive infringement logic. Regarding claims, users may alternatively assert compensatory damages under claim concurrence, and pursue non-compensatory remedies under claim accumulation, following the principles that special law prevails over general law and consumer protection takes priority. This paper proposes clarifying damages by recognizing lost data as quantifiable property and permitting discretionary or statutory minimum compensation for mental harm; rebalancing proof by shifting the burden to platforms to justify trigger thresholds and user consent, requiring only prima facie evidence from users; limiting the abuse of technology neutrality by holding that accessible data is not necessarily lawfully collectible, and rejecting platform defences based on open permissions or neutrality. Due to both the quantity of typical cases and the depth of technical legal analysis, the discussion on remedy paths such as public interest litigation remains insufficient. Future research should prioritize systematic regulation of commercial harassment, construction of valid consent, and application of public interest litigation, in line with technological and legal advancements. From the perspective of user rights protection, this study fills a gap in existing research on infringement logic and the concurrence and accumulation of claims. It offers theoretical support for judicial adjudication, user rights protection, and market regulation, thereby encouraging users to assert their lawful rights through litigation and promoting a sound mobile application ecosystem.

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