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Extraterritorial Experience with Intellectual Property Punitive Damages

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Abstract

The punitive damages system originated in the United Kingdom and has been widely developed in the United States. In view of the serious problem of intentional and repeated infringement of intellectual property rights in China, the Civil Code and relevant laws in the field of intellectual property rights have fully introduced a punitive compensation system. However, the application time of punitive damages for intellectual property rights is short, and various problems still exist in judicial practice. Through learning and drawing on the experience of the application of punitive damages for extraterritorial intellectual property rights, we hope to provide a reference for China's judicial practice. Through comparative law research, it is clear that the principle of prudence and modesty, reasonableness and proportionality of intellectual property punitive damages in China should be followed. The subjective application of the elements shall satisfy the subjective recklessness standard. The objective application requirements shall meet general and dynamic rules. The amount of damages shall be subject to the system of presumption and nominal loss.

Keywords

Intellectual Property, Punitive Damages, Comparative Law

1. Introduction

The punitive compensation system originated from the United Kingdom, was widely developed and applied in the United States, and gradually learned from the field of civil law in some countries. It is a civil compensation system to realize the function of punishment. The function of punishment is originally the function of criminal law, but the introduction of punitive damages into the civil field can combat infringement, stimulate the power of the right holder to protect

his rights, and reduce the national administrative cost. Although punitive compensation bears various functions such as punishment, containment and deterrence, its essence is still a civil compensation system. In the face of the serious phenomenon of intentional and repeated infringement of intellectual property in China, the Civil Code and relevant laws in the field of intellectual property have basically established the punitive compensation system rules for intellectual property, but the punitive compensation for intellectual property is applied for a short time, and there are still various problems in judicial practice.

Although the legal system is determined by the political, economic, cultural and other factors of a country, it is still necessary to learn from the legal experience of other countries. Although China fully introduced a punitive compensation system when compiling the Civil Code and revising the individual laws on intellectual property rights in 2020, the practice time of the law is relatively short. By learning from extraterritorial systems, some feasible solutions can be found for the existing judicial dilemmas in China.

2. Stipulate the Principle of Application of Law to Punitive Damages for Intellectual Property Rights

Civil law system countries have the tradition of enacting law, which is their main legal origin. The judges of civil law system countries should consider the legal rules first after determining the facts, and attach great importance to the interpretation of the law, in order to make the integrity and applicability of the law. And the common law system has a case tradition, and the case law is its formal legal origin. The basic construction of the common law system is based on the common law and equitable classification.

Both the United Kingdom, where the punitive damages system originated, and the United States, where punitive damages are widely applied, are all case law countries. Judges often make decisions based on legal principles, rather than focusing solely on the application of legal rules. China's judicial adjudication does not recognize the phenomenon of judges creating the law, but must take the rules of law as the yardstick. However, China's law does not put forward a reasonable principle of application for punitive damages, and only stipulates two applicable elements: intentional or malicious, and the circumstances are serious.

The punitive damages system breaks through the principle of complete compensation in the field of civil law and has the punitive nature of public law. Intellectual property rights are an intangible property right, the stability of rights is poor, and the boundaries of the content of rights are relatively blurred. The widespread application of punitive damages in the field of intellectual property rights can bring harm to the interests of society. Under the premise that the Intellectual Property Law comprehensively stipulates the punitive damages system, it is necessary to clarify the applicable principles of punitive damages for intellectual property rights, guide the prudent application of the punitive damages system, avoid causing abuse of the system, and inhibit innovation. The author

believes that the punitive damages for intellectual property rights should conform to the basic principles of prudence and modesty, reasonableness and proportionality.

2.1. The Principle of Prudence and Modesty

The principle of prudence and modesty requires that laws be formulated and enforced with a cautious and modest attitude to avoid excessive penalties. It is in line with the idea of prudent punishment put forward by the ancient sages of our country. Punitive damages punish the vicious infringer, in accordance with the human level of recovery before the occurrence of the wrongful act. High compensation can make the infringer unprofitable, thereby curbing infringement and guiding society to form a culture of respect for the intellectual property rights of others. However, the application of punitive damages means that the defendant is required not only to cover the plaintiff's losses and return the infringing profits, but also to pay more additional property to it. However, excessive compensation can also have negative effects. First, excessive compensation will increase social costs. The reasonable duty of care of the actor is necessary, but the overdue duty of care will greatly increase social costs and reduce social marginal benefits, especially patents, copyrights and other intellectual property rights, the boundaries of their rights are blurred, although the patent owner has a public patent instrument, but for some technological improvements of innovation and so on is difficult to easily identify infringement, excessive duty of care will inhibit innovation. Second, excessive compensation will lead to abuse of rights. High compensation in excess of losses will induce some rights holders to abandon the enforcement of intellectual property rights and instead look for opportunities to file lawsuits. This leads to rogue lawsuits and causes a waste of social resources. The punitive compensation system breaks through the principle of civil compensation and has a punishment function, although it is a civil compensation system, it undertakes the function of criminal law, and its retaliatory compensation method determines that it should be similar to the principle of criminal punishment for criminal crimes, and the court should be cautious in applying punitive damages. Without strictness and legality similar to that of criminal law, there is no tort law legitimacy. The principle of prudence and humility requires that care be always maintained in determining whether punitive damages are applicable and determining punitive damages multiples (He, 2022). Strictly enforce the conditions for the application of punitive damages for intellectual property rights, and continuously refine the requirements and rules for determining the multiple of compensation. Punitive damages shall only be for situations where the defendant's fault is serious and the tortious act is highly liable. The court needs to comprehensively discuss whether punitive damages are applicable and the reasonableness of the determined multiple of punitive damages in terms of the degree of subjective fault of the infringing defendant and the liability of the infringing act.

2.2. Principle of Reasonableness

The principle of reasonableness means that the laws formulated by legislators and the judgments made by judicial personnel must conform to the universal values and moral norms of society, and the ends and means are objective, appropriate, and reasonable. If the law must make value trade-offs, the ultimate value of the law is justice, that is, to measure legislation, justice and administration by the standard of justice, and it can be done in line with justice, and it cannot be done if it does not conform to justice. Justice includes formal justice and substantive justice. Formal justice requires clarity of law and due process. Substantive justice requires that legal norms and judicial decisions be reasonable. The principle of reasonableness has a long history of application, and is cognate with the principle of negligence in private law, and the principle of reasonableness has since been universally applied in the field of public law in various countries. The principle of reasonableness in the field of criminal law requires that the court sentence corresponding to the crime and sentence at the time of conviction and sentencing, and the evaluation of social harm conforms to the general values of society. The principle of reasonableness in the field of administrative law holds that administrative acts not only need to comply with institutional provisions, but also need to conform to fairness and justice, legislative purposes, exercise discretion based on reasonable motives, conform to universal values, follow due process, and make legal and appropriate administrative acts. The principle of administrative rationality is aimed at the discretionary power of administrative organs, such as whether the range of punishment and the control of the amount are appropriate, reasonable, just, proportionate, and undifferentiated, and the arbitrary behavior of individuals who are not subject to the administrative organs, including legitimacy, balance, and reasonableness. Legitimacy requires that both subjective motives and objective purposes be justified. Balance requires balancing the rights of all parties and ensuring that the rights of all parties are equally protected. Reason requires that administrative acts should conform to objective laws and be reasonable.

The Supreme Court of Canada has established a standard of reasonableness in its judgment¹. The United States Federal Court of Justice has stated that punitive damages cannot exceed reasonable limits². The Supreme Court of Ireland has also pointed out that punitive damages are imposed only if damages fail to express dissatisfaction with the infringement³ (Liu, 2022). As a civil law system with public law functions, in order to avoid its abuse, the principle of reasonableness in the field of public law can be introduced into the application of punitive damages for intellectual property rights, requiring whether the intellectual property punitive damages are applicable or not, and the amount of compensation should be reasonable, corresponding to the social harm and liability, and achieve the purpose of punishing and deterring infringers.

¹Whiten v. Pilot Insurance Co., 2002 SCC 18, para. 108.

²State Farm Mut. Automobile Ins. Co. v. Campbell, 538 U. S. 408, 417 (2003).

³Whiten v. Pilot Insurance Co., 2002 SCC 18, paras. 58-59.

2.3. Principle of Proportionality

The principle of proportionality is a basic principle in the field of administrative law, which is used to test the appropriateness of "means-ends", contains the concepts of moderation and balance, is used to reconcile conflicts of rights, and has stronger operability than the principle of legality. The principle of proportionality, as the principle of restricting public power in the field of public law, has slowly expanded to the field of civil law, requiring that when interfering in private rights and freedoms, the purpose must be justified, and the means to achieve the end are necessary and moderate.

The spiritual connotation of the principle of proportionality has a long history. The ancient Greek Aristotle put forward the concept of moderation and appropriateness on the issue of distribution, believing that appropriate and proportionate distribution is just and truly substantial fairness. Confucius, a famous thinker in ancient China, also put forward a similar view. Article 2 of the Magna Carta of Liberty of 1215 provides for the principle of proportionality of offences prohibiting excessive punishment, which has a similar connotation to the principle of proportionality and can be seen as the application of the principle of proportionality in criminal law. The European Middle Ages also proposed that the good brought about by war must be greater than evil, and that the means of war must be aimed at the theory of just war. Although the idea of proportionality has a long history, it has been established in legal circles as the principle of proportionality from German police administrative law. The Prussian Common State Act of 1794 set out the theory of necessity, which set out the necessity requirements for the measures taken by the police in the public interest. The Pharmacy Case of 1958 established the principle of proportionality in the German Constitution and proposed a third-order theory of proportionality (Wang, 2022).

With the formation and development of the principle of proportionality, countries began to gradually introduce rules and judicial precedents. Article 25 of the Greek Constitution, Article 36 of the Swiss Constitution, Article 53 of the Romanian Constitution and Article 17 of the Albanian Constitution all establish the principle of proportionality in the constitutional field, requiring that the means used to impose restrictions on rights should be proportionate to the ends. The EU Charter of Fundamental Rights also expressly sets out the principle of proportionality for restrictions on rights, allocation of rights in EU member states, and criminal penalties. In addition to the principle of proportionality expressly stipulated in the Constitution, the laws of some countries also stipulate the principle of necessity, reasonable restriction clauses, etc. Through the interpretation of necessity and reasonable restriction clauses in judicial precedents, we can glimpse the same legal connotations of the principle of necessity and the principle of proportionality. For example, in 1986, the Supreme Court of Canada interpreted a proportional analysis of limitations on rights in judicial cases based on reasonable limitations under the Charter of Rights and Liberties⁴. At the same

⁴R. v. Oakes, [1986] 1 S.C.R.103 [Oakes].

time, its scope of application has gradually been extended beyond the field of administrative law, and has gradually expanded from restricting power to balancing rights.

The principle of proportionality emphasizes that moderate intervention can curb power and abuse of power. The principle of proportionality emphasizes that moderate intervention can curb power and abuse of power. The intellectual property system itself is reconciling the rights and interests of right holders, infringers and the public interest. The concept of balancing interests exists in a number of IP systems, such as statutory licensing systems. The introduction of the principle of proportionality in intellectual property punitive damages is aimed at balancing the public interest while interfering with the intellectual property owner to a minimum (Xu, 2022). As a methodology, the core of the principle of proportionality lies in moderation, which has a broad meaning, and it is necessary to clarify its specific application logic. Both the second-order theory, the third-order theory and the fourth-order theory are the excavation of the deep meaning of the principle of proportionality to enhance the operability of the principle of proportionality (Liu, 2021). The author believes that the judgment logic of the principle of proportionality should first judge the legitimacy of the end, then judge whether the means achieve the purpose with the least degree of damage, and finally argue whether the damage caused by the means is proportional to the public interest purpose promoted.

2.3.1. Principle of Appropriateness

Appropriateness is a prerequisite for the judgment of necessity, which means that the means must contribute to the achievement of the goal. The principle of appropriateness helps to exclude and narrow the scope of means that are not fit for purpose. The principle of appropriateness has an important premise, that is, to judge the legitimacy of the target interest, that is, whether the end is really a problem that needs to be solved, whether it is important enough, and requires certain means to protect it. As far as intellectual property punitive damages are concerned, the purpose of the intellectual property system is twofold: first, to give legal rights to intangible objects to stimulate innovation, and second, to promote the dissemination of knowledge and orderly competition. Both safeguard the public interest by protecting the right holder. When determining the application of punitive damages, judicial organs shall demonstrate whether the application of punitive damages and the determined multiple of compensation are effective in stimulating innovation, promoting the dissemination of knowledge, ensuring orderly competition, and safeguarding the public interest.

2.3.2. Principle of Necessity

The principle of necessity is the original meaning of the principle of proportionality, and the most important connotation, that civil rights can be restricted only when necessary. The principle of necessity requires the legislative, judicial and executive organs to choose among a variety of programmes and means to achieve the least harm to the end. The principle of necessity encompasses the necessity of circumstances and the necessity of implementing measures. Necessity of circumstances means that a measure can only be applied in cases where it is necessary to apply the measure. The necessity of implementing a measure means that the measure can only be implemented if it is the least harmful of all measures that achieve an end, that is, it has the legitimacy of the means of implementation. As far as the application of intellectual property punitive damages is concerned, the court should consider whether the legal value of intellectual property law cannot be realized without the application of punitive damages, and whether punitive damages are applied to all means of inhibiting infringement and promoting innovation as the means of achieving the least damage to the end. The court shall demonstrate whether the multiples and amounts determined in the case are the smallest multiples and amounts that can achieve the purpose of curbing infringement and promoting innovation. Theoretically, as long as the amount of compensation is higher than the infringer's infringing profits divided by the probability that the infringing act will be exposed, the infringer will lose the incentive to infringe.

2.3.3. Principle of Equilibrium

The principle of necessity requires minimal harm, which often results in means that are fit for purpose to be considered the least damage. The principle of equilibrium, on the basis of the principle of necessity, holds that not only means of achieving the least harm to an end should be adopted, but the damage caused by such means should also be proportional to the social interests it promotes. The meaning of the calculation of biased weights requires a higher test of legitimacy for the means of achieving the least damage to the end, which can further reduce the ambiguity of the principle of proportionality. As far as intellectual property punitive damages are concerned, while arguing that the application of punitive damages and the determined multiple of damages have a legitimate purpose and are means to inhibit infringement and promote innovation to minimize damages, the court can use economic principles to measure the cost of measures and the benefits of measures, introduce cost-benefit analysis methods, and select the best compensation multiples to achieve Pareto optimality by comparing the relationship between the damage generated by different means and the benefits generated (Ni, 2021).

3. Refine the Subjective and Objective Determination Criteria for Punitive Damages for Intellectual Property Rights

Article 1185 of the Civil Code, which China compiled in 2020, clearly defines the applicable requirements of punitive damages for intellectual property rights as intentional and serious. Intent is to consider the psychological state of the infringer from the subjective aspect. Intent refers to the psychological state in which the tortfeasor knows that his behavior will cause harm to the society, and

wishes or allows the result to occur. The seriousness is to consider the means and consequences of the infringement from the objective aspect. Throughout the existing judicial cases, the court will continue to implement the infringement after the legal punishment, continue to implement the infringement after signing the settlement agreement, continue to implement the infringement after the right of the infringement warning, hinder the lawsuit, indiscriminately are identified as subjective intention. The court takes the length of infringement, scale of infringement, number of infringement, means of infringement, nature of infringement, consequences of infringement, whether to take remedial measures, and whether there is any obstruction to the lawsuit as the consideration factors to determine the determination of serious circumstances. The plot factors are numerous, scattered and scattered, and they are not universal.

In the Yinwang Company Infringement Trade Secret Dispute Case, the court held that the main management personnel of the defendant company were originally employees of the plaintiff company, and that the employee had committed infringement such as stealing trade secrets, violated the obligation of confidentiality, and had been criminally dealt with for the infringement of the trade secrets involved in the case, which should be found to be subjective intent. In the Feigela Home (Shenzhen) Company Infringement Design Patent Dispute Case, the court held that the defendant continued to infringe despite knowing the plaintiff's patent right, and had the intention of infringing. But the knowledge stemmed only from the plaintiff's warning of infringement. In the Shenzhen Phoenix Life Culture Media Advertising Company trademark infringement dispute, the court held that the plaintiff's registered trademark had a certain degree of popularity through continuous use, publicity and active rights protection, and the defendant's subjective intent to infringe as a similar operator was more obvious.

In the Yibin Wuliangye Company trademark infringement dispute, the court held that although the evidence in the case showed that the subjective malice of the infringement was obvious, given that the number of allegedly infringing goods sold was only 3 and the total sales amount was 1247 yuan, it was not determined that the circumstances were serious. In the Tianci Company's infringement of technical secrets dispute, the court held that the large-scale sale of infringing goods by the defendant was affected by many to more than 20 countries and regions, and the defendant's refusal to cooperate with the court's investigation during the trial should be found to be serious. In the case of the Yinwang Company's infringement of trade secrets, the court held that the defendant company had been engaged in the production of infringing products since its establishment, and the defendant's products had been sold at home and abroad, with a sales quantity of 1205 units, resulting in a loss of 914,300 yuan, which should be found to be serious. In the Feigra Home (Shenzhen) Company Infringement Design Patent Dispute Case, the court held that the defendant was the manufacturer of the allegedly infringing product and operated multiple stores on multiple platforms, and the infringement lasted for up to 4 years, which should be found to be serious.

Even in the copyright dispute case of Foshan Desaisi Building Materials Company, the court did not argue the subjective intention, but only used descriptive language to determine that the circumstances were serious. The court held that the defendant's manufacture and sale of infringing products and the sales volume was relatively large, resulting in a decrease in the plaintiff's sales share, causing greater economic losses, and the infringement was serious.

After the UK promulgated the Monopoly Regulations in 1623, the relevant provisions were repealed in 1969. Later, in 1988, the Copyright, Design and Patent Act reintroduced the punitive compensation system again, and stipulated the applicable conditions as subjective malicious and blatant infringement and shameless and wanton behavior. The British court pointed out that the infringer and the right holder engaged in the same industry competition business, but arbitrarily stole the photos of the plaintiff company's website, constitute commercial fraud, even if it is removed after the plaintiff's notice, it can not reduce the subjective malignancy of the infringement, so sentenced the additional compensation of 6000 pounds⁵. The British court has also noted that punitive damages apply only if damages cannot punish defendants, and has presented three types of applicable cases, including acts of public officer oppression, unconstitution, defendants' malicious infringement and substantial profits, and other cases required by law⁶.

In the United States, the punitive damages system began primarily with mental damage, applying to insulting behavior that can provoke anger⁷, then extending to repressive behavior by large corporations and later to product liability and violations of business relationships^{8,9,10}. The Due Process Clause of the Fourteenth Amendment to the United States Constitution prohibits excessive or arbitrary punishment of an actor and must not violate the requirements of the fundamental concept of fairness contained in constitutional precedents, and would constitute arbitrary deprivation of property if the sentence is too heavy to serve a legitimate purpose. The U.S. Tort Law restates the second paragraph of Article 908 that when adjudicating punitive damages, the nature of the act, the nature of the damage, and the defendant's property must be combined. There are no formal rules in U.S. law that limit the subjective and objective elements of punitive damages, and the specific application requirements are gradually clarified in judicial precedents.

The application of punitive damages in U.S. judicial judgments is often expressed as malicious action, arbitrary, reckless, disregard for the rights of others has 5 Absolute Lofts South West London Ltd v Artisan Home Improvements Ltd and Another, [2015] EWHC 2608 (IPEC) (14 Sept 2015).

⁶Rookes v. Barnard [1964] UKHL 1, p. 38.

⁷Genay v. Morris, I S.C.L. (1 Bay) 6, 6 (1784).

⁸Fleet v. Hollenkamp 52 Ky. 175, 13 B. Man. 219 (1852).

⁹Toole v. Richardson-Merrell, Inc. (1967).

¹⁰Roginsky v. Richardson-Merrell, Inc. (1966).

and other misconduct^{11,12}, with specific aggravating circumstances¹³, and sufficient evidence to prove that the infringer's behavior is liable, and fairness can only be maintained through punitive damages. In 1991, the Supreme Court of the United States stated that punitive damages should consider the possible or actual damage, the non-difficulty and duration of the infringer's behavior, whether the repeated infringement and its frequency, whether they know or hide the infringement profits, the situation of the property of the defendant, the litigation costs, and other penalties¹⁴. In 1996, the US Supreme Court also pointed out that the application of punitive damages should combine the degree of criticism, the difference and multiple ratio of damages, and the three elements of civil and criminal punishment for similar acts¹⁵.

Although American judicial cases express different subjective requirements, they are only formally different. The American judiciary basically requires a subjective intentional form for punitive damages. The U.S. judiciary basically requires subjective intentional forms for punitive damages. Currently, only a handful of states recognize punitive damages for gross negligence. However, the judgment of intent to infringe in U.S. judicial law is also constantly changing. The United States deliberately expressed the infringement as willful and wanton misconduct. In the 1853 case of Seymour v. McCormick, the first punitive damages award in the United States, the Supreme Judicial Court divided the four subjective psychological states of the infringer when infringing, namely good faith, ignorance, wanton, and malicious. The court held that only the economic losses of the right holder were sufficient for the state of good faith or negligence, and punitive damages beyond the scope of the right holder's economic losses were required for wanton and malicious purposes¹⁶. In the 1983 case of Underwater Devices, Inc. v. Morrison-Knudsen Co, the Court held that the determination of intent required the infringer to exercise a duty of positive reasonable care. The court pointed out that if the perpetrator's conduct constitutes the possibility of infringement, that is, the existence of the patent right is known, the infringer has the obligation to actively seek professional advice, and if not, it is presumed to be malicious in the infringement¹⁷. In 2007, the United States Court established the objective recklessness standard in the Seagate case. The infringer should not only prove the objective possibility of infringement, but also prove the subjective knowledge or should know the possibility of infringement. The court held that the right holder should be aware of the risk of infringement of the patent content and itself at the same time, and the right holder needs to pro-

¹¹Shugar v. Guill 283 S.E.2d 507 (N.C.1981).

¹²Surrency v. Harbison, 489 So. 2d 1097, 1105 (Ala. 1986).

¹³Peete v. Blachwell 504 So. 2d 222 (Ala. 1986).

¹⁴Paciic Mutual Life Insurance Co. v. Haslip. 499 U.S.7,18,23-4 (1991).

¹⁵BMW of North America, Inc. v. Gore, 517 U. S. 559, 575-585 (1996).

¹⁶Seymour v. McCormick, 57 U.S. 480, 14 L. Ed. 1024 (1853).

¹⁷Underwater Devices Inc. v. Morrison-Knudsen Co., 717 F.2d 1380, at 1391 (Fed. Cir. 1983), over-ruled by in re Seagate Tech., LLC, 497 F.3d 1360 (Fed. Cir. 2007).

vide reasonable proof before the duty of reasonable care¹⁸. In the Halo case in 2016, the Supreme People's Court changed the clear and convincing standard of proof required by the right holder in the Seagate case, which only required proving that the infringer had a subjective recklessness standard¹⁹. The right holder only needs to prove that the infringer is subjectively malicious, and does not need to prove that the objective malice of the infringer, and it is less difficult for the right holder to obtain punitive compensation. The change in the US judiciary's subjective determination of the application of punitive damages is precisely the process in which the court continues to explore the criteria for determining intentional determination and balances the interests between the right holder and the actor.

Section 53.2 of the Canadian Trademark Act provides that if a court is satisfied by any interested person that a violation of this Act has occurred, the court may make any appropriate order, including injunction, recovery of damages or profits, punitive damages, and destruction or otherwise disposition of any offending goods, packaging, labels and advertising materials and any equipment used to produce the goods, packaging, labels or advertising materials. However, its copyright and patent laws do not expressly provide for the application of punitive damages. In judicial practice, Canada does not often apply the punitive damages system, holding that subjective intent alone is not sufficient to apply punitive damages, but also needs to be liability, and mainly applicable to misconduct and repeated infringements. In Chanel S. de R.L., the court held that the defendant sold counterfeit goods, concealed evidence to evade liability, and was a repeat offender, and therefore applied \$250,000 in punitive damages²⁰. In Airbus Helicopters S. A. S., the federal court held that the defendant's brazen exploitation of the plaintiff's patent was liable and punitive damages of \$1 million on a pro rata basis²¹. The Canadian courts have also noted that punitive damages span civil and criminal and should be clearly liable for conduct²².

The author believes that, drawing on the judicial practice of the United States, in China, the court should change the distinction of the requirements listed in the Judicial Interpretation of Punitive Compensation for Intellectual Property Rights as the elements of determining intent, and do not consider the standard of proof and evidence chain. The identification of subjective intention can refer to the identification of intention in the United States and adopt the standard of subjective recklessness. The evidence to demonstrate the subjective intent of the infringer should be a reasonable chain of evidence. After the right holder warns the infringer of the infringer's infringement by sending a lawyer's letter or other conduct, the infringer's continued infringement is not a sufficient condition for determining the infringer's subjective intention. The law cannot require the in-

¹⁸In re Seagate Tech., LLC, 497 F.3d 1360, at 1365 (Fed. Cir. 2007).

¹⁹Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923 (2016).

²⁰Chanel S. de R.L. v. Lam Chan Kee Company Ltd.Ottawa, Ontario, August 30, 2016.

²¹Airbus Helicopters S. A. S. v. Bell Helicopter Texteron Canada Limitée, 2017 FC 170, paras. 396-441.

²²Whiten v. Pilot Insurance Co., 2002 SCC 18, para. 36.

fringer to always pay attention to whether the infringement occurs, but only when the infringer realizes the risk and still has a rash infringement is determined to be subjective intention. Therefore, the subjective intent of the infringer can only be found when the plaintiff's intellectual property rights are highly similar or the defendant completely ignores the plaintiff's warnings.

As far as objective elements are concerned, although China's judicial interpretations give some details to the seriousness of the circumstances, they lack general and dynamic rules. Drawing on the Canadian judicial practice, the essence of applying punitive damages lies in the degree of misconduct that defendants commit should be condemned. Looking at national IP laws, punitive damages regimes have not been introduced into the field of IP through largely identical rules. Therefore, in judicial practice, China should take into account the differences in the application of different types of intellectual property rights, and reasonably determine the specific sub-elements according to the differences in patents, trademarks, copyrights, inventions, utility models, etc. under the general requirements of subjective intent and serious objective circumstances.

Most common law countries have a complete jury system and constitutional review system, which have distinct judicial characteristics. Unlike our judicial system, the application of punitive damages in the United States is determined by a jury. The composition of the jury in the United States is randomly selected from the registration list, is socially representative, represents the general perception of ordinary citizens, and represents the public's awareness of the accountability of infringement. At the same time, both the courts of first instance and appellate have the power to conduct a legitimacy review of whether there is an abuse of discretion and whether it violates constitutional due process, and may examine whether the jury's reasons are justified and whether there is extremism and corruption in accordance with the principle of constitutionality. However, China does not have a perfect jury system, nor does it recognize the unconstitutional review system, whether punitive damages are applied, and the amount of compensation is decided by the judge. Therefore, our courts can try to make procedural adjustments and appropriately introduce jury's awareness of the harm to society.

4. Accurate Calculation of the Amount of Intellectual Property Punitive Damages

The British intellectual Property Law stipulates the three calculation methods of infringement loss: infringement loss, reasonable use fee and infringement profit. Among them, the loss of goodwill and reputation is the consideration for determining infringement losses, and the sales volume and contribution rate of infringement are the factors for determining the profits of infringement. The method of calculating UK licence damages is established by judicial decisions on a continuous basis. The amount of compensation is calculated according to the license fee, including two types of actual license fees and reasonable license fees.

England provided for three times the amount of damages in the Monopoly Act of 1623, and after the relevant provisions were repealed in 1969, the scope of compensation was not limited in the Copyright, Design and Patents Act 1988.

In the United States, whether the intellectual property punitive damages are based on the tort damages and whether the punitive damages are proportional to the punitive damages presented is not uniform. The second restatement of the U.S. federal tort law and the Chinese rectification of nearly twenty state courts, including the District of Columbia, New York, and Pennsylvania, held that punitive damages could be applied as long as there were nominal damages. The main reason is that punitive damages focus on the defendant's conduct, and in the case of extremely bad infringement, even if the right holder has no actual loss, it should be punished. Courts in nearly thirty states, including California and Florida, held that punitive damages should be based on actual losses, and there would be no reasonable liability.

Articles 284 and 285 of the U.S. Patent Act stipulate the basic rules for the amount of damages in the United States, but do not specify the specific calculation rules, and only require that the amount of compensation not be lower than the fair use fee. At the same time, the United States has identified two ways of calculating loss of rights and licensing fees in judicial cases. Infringement losses refer to the profits obtained due to the infringing act, and plaintiff needs to prove its profits when no tort occurred. If the right holder claims that the infringer's infringing profits are its infringing losses, it shall produce evidence to prove that there is a reasonable possibility between the infringing profits and the infringing losses, and the profit losses are mainly determined from the three aspects of reduced sales, increased costs, and reduced prices (price erosion). The value of the product is affected by market factors and is not static, considering the value of the patented technology could have risen. The lost profit is not only for the reduction of prices and sales, but also for advertising and marketing expenses (Li, 2018). The license fee includes the actual license fee and the reasonable license fee, and the reasonable use fee is mainly considered from 15 elements such as the nature and scope of the license and the license term, including the hypothetical negotiation method and the reference to the prior license fee method and other calculation rules²³.

The United States first enacted the Trademark Act in 1870, which was later repealed and a new Trademark Act was enacted in 1946. The U.S. Trademark Act (15 U.S.C. § 1117) provides that monetary relief for infringing losses can be divided into infringing losses, infringing profits, and litigation costs. Therefore, the court needs to value such profits and tort losses, and when valuing the profits, the plaintiff only needs to prove the defendant's sales activities, while the defendant needs to prove its alleged expenses and all elements seeking deductions (Li, 2014). The U.S. Court of Appeals, the Fifth Circuit, in its March 2022 trade secret case, also noted that in trade secret misappropriation cases, a flexible and ²³Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116 (U.S. Dist. 1970).

imaginative approach was used to the calculation of damages. Thus, under this approach, damages may take many forms, including the value of the plaintiff's lost profits and reasonable royalties. Damages may also be determined accordingly when the parties agree in advance on the value of the relevant trade secrets.

U.S. law did not initially set a multiple cap for punitive damages, and courts generally determined the amount of damages on the basis of reasonableness. This has also led to a large number of infringers filing complaints against the Constitution on the grounds that court decisions do not comply with the principle of due process. Drawing on the German principle of proportionality, U.S. courts held that there should be a proportional relationship between the amount of punitive damages and damages, but rarely specified specific multiples. U.S. trademark law only provides for 3 times the compensation for counterfeit trademarks, and no other types of infringement are mentioned. Although the U.S. Patent Law has a provision of "3 times damages", different courts have different understandings of whether it is punitive damages or compensation. The U.S. Court of Appeals Fifth Circuit, in its March 2022 trade secret case, also noted that the court has consistently rejected the view that the constitutional line of excess established in punitive damages awards is marked by simple mathematical formulas, even those that compare actual and potential damages to punitive damages. In fact, if a particularly egregious act causes only a small amount of economic damage, a low award may appropriately support a higher rate than the high amount of compensation. A higher rate may also be reasonable in cases where the monetary value of the injury is difficult to detect or where the monetary value of the non-economic damage may be difficult to determine.

Civil law is a national system, with a distinction between public and private, and punitive damages are less applicable. Punitive damages have not yet been legislated in Germany. In terms of the rules for calculating damages, article 252 of the German Civil Code stipulates that tortious damages should compensate the right holder for tortious losses. German patent law also stipulates that intentional or negligent infringement of another person's patent right shall compensate others for infringement losses. At the same time, Germany has also established through jurisprudence the calculation of infringement profits and licensing fees. In terms of the rules of proof, § 287 of the German Code of Civil Procedure provides for the confirmation of the amount of damages, that is, the plaintiff only needs to prove the scope of the damage in the litigation, and the judge can determine himself on the basis of relevant evidence (Fan, 2010). The Japanese legislature has also not incorporated punitive damages into its legal system, and it can be learned that with regard to the burden of proof of damages, Article 102 of the 1998 Japan Patent Law provides for a presumption system for the amount of damages, which simplifies the determination of the amount of compensation by reducing the requirement to prove the amount of damages (Zhang, 2010).

Similar to the United States, the amount of punitive damages is determined by

one to five times the compensation base. The base calculation method includes infringement loss, infringement profit and multiple of license fee. However, in China's judicial practice, the infringement loss and profit adopt a single sales reduction calculation method, and the calculation method of license fee multiple is not perfect. Although the calculation of damages in various countries is basically calculated through infringement loss, infringement profit and license fee, the specific calculation methods of infringement loss, infringement profit and license fee are constantly explored in judicial cases. For example, infringement loss includes decreased sales volume, cost increase, price reduction, goodwill and reputation loss; infringement profit includes infringement sales volume, contribution rate, etc. Drawing on the specific calculation rules of various countries can provide a reference for the calculation method of infringement loss, infringement profit and license fee in China's judicial practice. On the burden of proof, the countries basically use the presumption system of the amount of damages, that is, the court can infer the specific amount of compensation based on the relevant evidence. Although there is a similar presumption in China, namely the legal compensation system, this presumption is not apply to the specific calculation of infringement loss and infringement profit, but has become an alternative system for the court to abandon the calculation of infringement loss and infringement profit. Therefore, making good use of the presumption system of damages can effectively solve the problem of impossible calculation of damages, and thus the application of punitive compensation.

Whether the base of punitive damages is premised on nominal injury or actual damage is not uniform in the judicial practice of various countries. Our country is premised on actual damages, resulting in most cases where actual losses cannot be calculated and it is difficult to apply punitive damages. According to the statistics, the legal compensation application rate is as high as 80 percent (Li and Sun, 2020). Therefore, nominal damages should be determined as the precondition for the application of punitive damages by drawing on the nominal loss system, and when there is evidence to prove that the infringing damage has indeed occurred, punitive damages should be applied according to the assessed infringing loss.

In addition, one important reason why the British and American law departments generally accept the punitive compensation system is that its criminal punishment and administrative punishment system have certain limitations. The application of the criminal law requires a standard of evidence to exclude reasonable doubt, resulting in a high standard of proof of property penalties in criminal law. Take the famous Simpson wife murder case in American history, for example, although West Simpson was not punished by criminal law, he was sentenced to huge punitive damages. In addition to criminal penalties, China also has a relatively extensive administrative fine and sanctions system. Therefore, when determining the amount of punitive damages, China also needs to reasonably consider the situation of the administrative fines in the individual case,

so as to reasonably determine the amount of punitive damages.

5. Conclusion

By learning and drawing on the application experience of punitive compensation for intellectual property, the author proposes that the punitive compensation for intellectual property in China should follow the principle of modesty, rationality and proportion. The applicable requirements of punitive compensation for intellectual property rights in China should meet the subjective recklessness standard and objective standards of subsistence and dynamic. The presumption system and the nominal loss system shall apply to the amount of damages. The subjective recklessness standard and the general, dynamic objective identification standard can improve the practicability of punitive compensation for intellectual property rights. The presumption system of damage compensation amount and the nominal loss system of the United States, Japan and other countries can reasonably estimate the loss by combining various factors when it is difficult to calculate the tort loss, so as to resolve the phenomenon of high application rate of legal compensation in China.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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