The governance over "rating by bidding" in searching engines

Article (Accepted Version)


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The Governance over “Rating by Bidding” in Searching Engines

Abstract

The proliferation of illegal sales of prescription drugs online creates substantial challenges for consumers and enforcement authorities. Legal and ethical concerns arise when search engine companies (SECs) direct consumers to some web sites which content is either unethically or unlawfully controversial. It is essential to combat rogue trading in the digital arena through enhancing the internet sales oversight over drug safety and legitimacy. Merely relying upon laws and regulations prove to be insufficient to address the issues. It is argued that multipronged approaches are at stake to drive the SECs to behave in a more socially responsible and sustainable way.

Introduction

With the upsurge of the online pharmacy, serious concerns have emerged about the adverse implications on consumer safety.¹ Many legal issues have arisen as search engines grow as a lucrative sector. Some rogue pharmacies make huge profit through manipulating search results against the neutral policy,² proportionally tied to the traffic that the advertisements generate. Given the potential for fraudulent sales of drugs over the internet, the operation model enables those SECs to engage in illegal process of drugs.³ The situation has become more acute for Chinese patients, which attributes to not only the information asymmetry, but also inadequacies and failures in regulating this new industry in China.⁴ Given little independent verification of the medication qualification, Dubbed as Google in China, Baidu manages to dictate the particular positioning of the sponsored link when a bidder pays the most. As a consequence, a hospital that does not fulfil standardised verification requirements can enter the supply chain. Underdeveloped regulation of Internet medication poses substantial challenges for China’s conventional regulatory framework. In addition, the lack of effective oversight by SECs exacerbates the risk of purchasing drugs via internet. Out of materialism and profit-orientation, the existing governance mechanism characterised with institutional void worsens the protection of consumer safety. Patients in the end of the chain suffer ultimately from the dysfunctional regulatory infrastructure and enforcement. The absence of adequate governance is viewed as crucial for the integrity of the area. Notably, An SEC will not evolve automatically in the ecosystem operating in a way that is compatible with integrity. It all comes down to how its operation is governed.

In response to the challenge, this paper proceeds in six parts as follows. Part I starts with Baidu’s profit-oriented model, i.e. ranking via bidding, and examines how bidding price is given significant weight in search results ranking. Negative consequences, such as Zexi wei’s tragedy, attributes largely to Baidu’s unequitable practice. Part II analyses on a variety of

² Marina Lao, ‘Neutral Search as a Basis for Antitrust Action?’ (July 2013) Harvard Journal of Law & Technology Occasional Paper 1, 12
⁴ Yadan Ouyang, ‘Student’s Death Highlights Gaps in China’s Health Regulations’ (2016) 17 (6) The Lancet Oncology 709
factors that contribute to the abuse of the internet medication. Among other things, the section focuses on three variables, that is, materialism, monopoly and asymmetry of information between consumers and SECs. Part III refers to the U.S. experiences to address these similar challenges that China has been facing. Both the U.S.’ statutory approaches a leading case of Google are covered, which paves the way for the exploring of whether the U.S. model could be transplanted to China. Part IV looks at the ethical, legal and regulatory framework to address the cyber advertisement of medical service. This section highlights that the governance failure should not attribute primarily to the inadequate legal and regulatory systems, but also to the institutional void. Part V proposes a multipronged approach to resolving the problem of illicit online medication and the ineffective governance regime. A comprehensive system encompasses a variety of stakeholders’ participation, such as the involvement of private actors as well as public ones. It is argued that the Chinese government and SECs should work proactively to reshape the Internet governance to fit their social responsibility. This study ends with a concluding remark. It is affirmed that, as a gatekeeper, an SEC will only be able to operate viably when they implement their obligation with due diligence and operate in a more sustainable and socially responsible way.

A. The Ranking via Bidding (RvB): A Profit-Oriented Model

Internet pharmacy has been growing rapidly, where search engines companies (SECs) are conventionally considered as neutral platform of information disseminators. The revenue derived from advertising can be substantial. A profit-oriented model, the ranking via bidding, has become a major revenue source for SECs. The internet medication is run with paid listing and keyword bidding. As the most popular search engine in China, Baidu’s advertising accounted for $15 billion, 76 per cent of its total revenues in 2018. This method renders it difficult for consumers to distinguish between those paid promotional links and natural ones. Baidu makes the advertising links preferentially visible, compromising the authenticity of users’ searching. The winner in a bid ranking gains priority in having its information appear the first. Baidu puts the search results on top at all time to promote an entity which pays most.

1. The Rise of Online Pharmacies

The model of open-ended connectivity has given rise to platforms for trade in illicit drugs. An SEC adopts a complex algorithm, which deals with results on the ground of variety of factors, such as hyperlinks and page-specific content. In a neutral way, it does not manually intervene.
with organic search results generated by the computer algorithm. Nevertheless, Baidu has been inherently biased towards the advertisers, which affects the inclusion or exclusion of certain websites that can be attributable primarily to the interests of paid advertisers. The Nasdaq-listed Baidu uses paid-listing to direct traffic to websites, which constitutes an important source of the firm’s income. An entity, like a hospital, buys certain keywords that will trigger the visibility. The extent to which an advertisement is displayed depends upon how much the hospital pays. Unlicensed suppliers may exploit the loopholes to pay higher rankings in Baidu’s search results, and some authenticised ones could be blocked provided that they refuse to pay for listings. As Vaidhyanathan observed:

“Baidu’s core business is not facilitating searches, but selling advertising space, or rather, selling searchers’ attention to advertisers and managing both the price it charges for access to the formers’ attention and the relative visibility of those advertisements.”

Baidu ranks medical information through a bidding process, and top search slots is to be sold to the highest bidders. The statistics in the first quarter of 2020 shows that China had 904 million Internet users. The rise of online pharmacies provides patients with more supply options. Due to the price sensitivity, vulnerable groups purchase drugs from the internet because they may not afford to access medications from other sources.

2. The Manipulation of Search Results

Baidu makes huge profit through a most controversial model of “Ranking via Bidding” (RvB), through which the firm promotes some false medical information. As a paradigm case of bias, Baidu adopts the schemes to manipulate search results, systematically giving more prominent visibility to some clients in lieu of others. Those paid listings do not always look reasonably different from the natural results returned to users. It remains an enormous challenge to distinguish valuable information from those misleading or even fraudulent one.

(a) Take Advantage of Consumers’ Misperception

There are manipulative aspects in SECS’ ranking algorithms. Baidu’s bidding system provides advertising in the form of sponsored results that fill the top of a search result. Consumers tend to trust the searching results ranked higher from a psychological perspective. The listings that ranked higher enhance patients’ awareness psychologically, which make them take it for

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12 ‘Search Engines and Ethics’ (Stanford Encyclopaedia of Philosophy, 2016) <https://plato.stanford.edu/entries/ethics-search/>
13 Siva Vaidhyanathan, The Googlization of Everything (Berkeley, Los Angeles, University of California Press, 2012) 1-26
14 Lai Lin Thomala, ‘Number of Internet Users in China 2008-2020’ Statista (30 April 2020)
granted that the frontiers are more valuable. Problematically, SECs can use algorithms to manipulate the privileging of some sites over others in terms of rankings and inclusion or exclusion, and can even create the highest-ranked sites upon requests.\(^\text{18}\) In such a bidding process, paying more means increasing more chances of higher ranking. This incentivises advertisers to pursue a higher ranking for their sites and then gain better exposure. With this artificial scheme, the justice has been undermined in this sector. In consequence, advertising income provides a strong pecuniary incentive for Baidu to provide unobjective search results.

(a) Ranked Higher: The Relationship between Baidu’s Search Engine and Advertising

SECs interfere with search results to maximise advertising revenue.\(^\text{19}\) As discussed above, there is an inherent relationship between rankings and profitability in search biddings, that is the bidding price is given significant weight in rankings of search results. As such, Baidu could even give top rankings to unlicensed medical websites and block those that refuse to pay for listings. A bid occurs every time and the resulting score measures how well the advertising is working.\(^\text{20}\) Hospitals promote its medical information for higher rankings to attract patients. Such kind of covert operations via ranking by bidding is tied to the proprietary search algorithms.\(^\text{21}\) Rogue pharmacies can, however, take advantages of loopholes in Baidu’s advertising system, which enable them to place advertisements therein.\(^\text{22}\) Circumventing Baidu’s controls, the alleged advertising practices enable them to purportedly fulfil its safeguarding requirements. Through such an illegitimate circle, enormous profit from the paid bidding incentivises the interested entity to continue investing in this RBV transactions. As such, Baidu can reap profit from those entities’ continuous involvement in the operation.

(b) Mislead Users

Advertisements should be ensured equitable and authenticable. An SEC is expected to label paid advertisements in a discernible way. Baidu operates a bidding process to allocate paid results, which sit to the side of unpaid result.\(^\text{23}\) The firm systematically favours its own rankings based on the bidding module by prominently displaying in the search returns, irrespective of merits.\(^\text{24}\) The rating by bidding has been accused of practices that are confusing to the public at best, corrupt at worst.\(^\text{25}\) Such a model has aroused controversies, as it did not fall within the arena under a conventional advertising law.


\(^{20}\) Frederic Kaplan, ‘Linguistic Capitalism and Algorithmic Mediation’ (2014) 127 (1) Representations 57, 63


\(^{22}\) Tim Mackey and Bryan Liang, ‘Pharmaceutical Digital Marketing and Governance: Illicit Actors and Challenges to Global Patient Safety and Public Health’ (2013) 9 (1) Globalization and Health 45

\(^{23}\) Kathrin Hille, ‘Baidu Faces Wave of Legal Challenges’ Financial Times (30 November 2008)


It is noteworthy that Baidu failed to help users differentiate between bidding rankings from those natural ones. Its paid listings do not look different from the normal results returned to users. Baidu uses promotion to mark bidding results, which did not provide a distinction from non-paid search results. Baidu's search results allegedly blurred the line between a paid advertisement for the experimental treatment and more helpful information for patients. Baidu mixed the results together so that users could not see which of the results had been paid for and which were freely chosen by the search engine. Baidu does not clearly differentiate between what is sponsored and what is natural, the consumer runs the risk of being confused. A reasonable user cannot not be able to tell them apart, neither could he be aware of the risks correlated with the bid online listings and content. Only is it justifiable to identify the bidding as a way of advertising activity, and thus regulated by the Chinese Advertisement Law (CAL 2015). Although China has strict laws about promotion of medical products and services, it remains legally unclear whether paid search results can be considered as advertisements.

Given the paid listings are indistinguishable from normal search results, the bidding practices distort objectivity of search results and mislead internet users. Advertising should be identifiable and should enable consumers to identify it as advertising. In order to ensure authenticity and identifiability of the advertisement, Baidu should filter information with due diligence, especially in medical and pharmaceutical supplies.

(c) The Negative Effect of SEC’s Ranking/Rating by Biding (RvB)

Baidu has been abusing its leading position in the search engine business in the detriment of the rights and interests of consumers. Such a profit-driven model enables fake hospitals not only to advertise their medical service, but also to avoid negative records. The advertising information transmitted to the users this way will dilute and sacrifice some consumers’ interests. Many consumers would be left vulnerable to the predatory practices. What a patient can find is actually an artificially advantages reputation instead of a genuine one. This is at the expense of patients, the final users of the vicious capital chain. The resulting costs of bidding are ultimately transferred to patients, driving medical costs unreasonably high. These practices affect the fairness and objectivity of search results and mislead internet users. Much worse, ranking medical information by how much revenue it generates can be a matter of life or death to anyone. Consumers turn out to be victims in this unethical chain.

3. Zexi Wei/Baidu

There have been numerous reports of serious adverse events or interactions following the RvB transactions. The death of 21-year-old Zexi Wei is reflective of China’s chronic problems afflicting China’s false online medical advertisements. Suffering from an incurable disease, Wei searched Baidu for treatments for his synovial carcinoma—malignant tumors that grow

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26 Min Jiang, ‘The Business and Politics of Search Engines: A Comparative Study of Baidu and Google’s Search Results of Internet Events in China’ (2013) 16 (2) New Media & Society 212, 233
27 Yadan Ouyang, ‘Student’s Death Highlights Gaps in China’s Health Regulations’ (2016) 17 (6) The Lancet Oncology 709
29 Shichuan Wang, ‘Death of College Student Raises Questions on Baidu’s Ethics’ People’s Daily (2 May 2016)
in soft tissues, usually around joints. He found one offered by an outsourced oncology department in the Beijing No. 2 People's Armed Police Hospital. The hospital had contracted out services at its cancer clinic to a private operator which was part of the Putian-owned network of private hospitals. It has monetised its Tri-Star credibility. As such, patients have every reason to trust its credibility. Furthermore, Wei had trusted the hospital because it was at the top of Baidu’s search results and not clearly marked as a paid-for link, sparking complaints that the company's pay-for-listing policy is ethically dubious.

It is entertained that SECs are accountable for their arbitrariness and bias in favour of those who have paid most. Baidu provided key word search advertising for these medical institutes, but the linked medical services turned out to be the fake ones.\(^{30}\) Wei had died following unsuccessful experimental immunotherapy treatment. Patients who seek medical advice on the Internet largely do so out of desperation, as was the case with Wei, who are likely to have consulted reputable doctors before pursuing other options.\(^{31}\)

The tragedy has hit on medical issues at a time when health is a prominent subject in China.\(^{32}\) There is low tolerance for anyone that seems to be involved in exposing consumers to health risks in China. The case has reignited public concern over Baidu's advertising ethics. Baidu has been criticised on social media for allowing the hospital to advertise a reportedly false treatment on their site.\(^{33}\) The high-profile case of \textit{baidu v Zexi Wei} also epitomises the current ecology of the inability of Chinese regulators to ensure quality and safety in its health care system. Baidu’s “ranking via bidding” model indicates the Internet prescribing below a minimum standard of medical care. The tragedy of Wei’s death calls for increased regulation of search engines’ advertising services.

\textbf{B. Contributing Variables to the Tragedy}

Ecommerce has transformed how goods are supplied to consumers. Meanwhile, it has also exposed weaknesses in supply regulations of medication. The objectivity of Baidu’s search results was compromised by the paid-search listings. Unlicensed hospitals have managed to generate considerable revenue. SECs exert little effort to ensure that online drug sellers from which they obtain advertisement revenue are legitimate. There are many variables contributing to rampant illegal online drug sales. Moral hazard inevitably arises given that the preclusion of Google, to some extent, leads to Baidu’s monopoly.

1. The Ideological Transformation: Is Materialism the Original Sin?

The main purpose for business is to maximise profit. Conflicts arise between an SEC’s incentives for profit and its societal role in providing access to information in a manner that

\(^{32}\) Austin Ramzy, ‘China Investigates Baidu after Student’s Death from Cancer’ \textit{The New York Times} (3 May 2016)
\(^{33}\) Sophie Williams, ‘Search Engine Giant Faces Probe over Death of Chinese Student who Sought Cure for His Cancer on the Internet’ \textit{Daily Mail} (3 May 2016)
is fair, accurate and unbiased.\textsuperscript{34} Paradoxically, there is a conflict between Baidu’s desire to maximise profit and its socially responsible role in providing an inartificial searching service. Baidu has financial incentives to be complicit in the scheme since the ads income represents the overwhelming majority of Baidu’s revenue. It is an example of putting profits over morality. Thompson’s theory applies here to interpret the phenomenon, which is embodied in the dimension of moral economics.\textsuperscript{35} It differs from the economic determinism set forth in Adam Smith’s “Wealth of Nations.”\textsuperscript{36} The theory sets limits to economic development out of egoism.\textsuperscript{37} For the sake of public interests, the theory forbids the violation of moral bottom lines.\textsuperscript{38} It is because people follow moral norms instead of the power of money that helps to maintain a balance in economic development.\textsuperscript{39} Ideally, as conflicts affecting online advertisements in the context of search engines are eventually resolved, the amount of bias in search engine results will decline. SECs are supposed to strike a balance between key strategies. Baidu should fulfil its gatekeeper’s role in a socially responsible way.\textsuperscript{40} Simultaneously, it should protect both the proprietary algorithms and its interests of shareholders to whom the firm has legal obligations.

2. **Moral Hazard Arising from Monopoly**

Wei’s death has sparked widespread criticism from state media and internet users, who complained about the murky online environment for health information in China where Baidu dominates.\textsuperscript{41} There is a cybermarket for illegal distribution of drugs that are unapproved by regulatory authorities and marketed with fraudulent health claims. The sponsored links falsely claimed that some unlicensed medical companies were legitimate. Baidu allows sellers to bid for the rank at which their search results appear, and it has created an enormous market for those who sell fake drugs. As the unchallenged market leader in China, Baidu’s users consider it to be overly commercialised and ethically challenged. Given Google is banned in China and Baidu has virtually monopolised the sphere of online advertising, severely limiting netizens’ options. Baidu feels no pressure in the market of search engine, and adopts an overwhelmingly profit-orientated operation model.\textsuperscript{42} Moral hazard has arisen inevitably due to the lack of competition.\textsuperscript{43} From consumers’ perspective, few people would use Baidu due to its artificial control of ratings by bidding largely driven by profit, had Google

\begin{thebibliography}{99}
\item\textsuperscript{34} Mariarosaria Taddeo and Luciano Floridi, ‘The Moral Responsibilities of Online Service Providers’ in Mariarosaria Taddeo and Luciano Floridi (eds.) The Responsibilities of Online Service Providers (Berlin Heidelberg: Springer, 2017) 13-42
\item\textsuperscript{35} E. P. Thompson, The Moral Economy of the English Crowd in the Eighteenth Century (Oxford, Oxford University Press, 1971) 76-136
\item\textsuperscript{36} Peter Ulrich, Integrative Economic Ethics Foundations of a Civilized Market Economy (Cambridge, Cambridge University Press, 2008) 111-184
\item\textsuperscript{37} William Dixon and David Wilson, ‘Political economy and the social disciplines: the modern life of Das Adam Smith Problem’ (2014) 38 (3) Cambridge Journal of Economics 623, 641
\item\textsuperscript{38} Michael S. Moore, ‘A Tale of Two Theories’ (2009) 28 (1) Criminal Justice Ethics 27, 48
\item\textsuperscript{39} Benjamin M. Friedman, ‘The Moral Consequences of Economic Growth’ (2016) 43 Society 15, 22
\item\textsuperscript{40} Christoph Luetge, ‘Responsibilities of OSPs from a Business Ethics Point of View’ in Mariarosaria Taddeo and Luciano Floridi (eds.) The Responsibilities of Online Service Providers (Berlin, Hedberg, Springer, 2017) 119-133
\item\textsuperscript{41} Alyssa Abkowitz, ‘China Issues New Internet Search Rules Following Baidu Probe; Regulator Mandates ‘Objective, Fair and Authoritative Results’ Wall Street Journal (26 June 2016)
\item\textsuperscript{42} Linda Sau-ling Lai, ‘In Search of Excellence-Google vs Baidu’ (2011) 60 World Academy of Science, Engineering and Technology 1108, 1111
\item\textsuperscript{43} Anthony Li, ‘Whom to Trust When Sick? China Perspectives (28 October 2019)
\end{thebibliography}
been available as another option.\textsuperscript{44} Consumers would be able to undertake comprehensive research on various medical procedures and products and make a well-informed decision. Furthermore, Baidu would have to give up this practice with Google competing on an equal basis. Baidu has profited from advertisements for illegal sales of controlled prescription drugs online. Relying on advertisements of fake health care products for 30\% of its revenue,\textsuperscript{45} It is this huge Profits that induce SECs to manipulate results and thus preserve their market dominance, due largely to the lack of balances and checks in the bidding process.\textsuperscript{46}

3. Asymmetry of Information Access: Lack of Transparency

Concerns affecting objectivity and bias are closely related to controversies pertaining to the lack of transparency. Consumers who are better informed are far less likely to undergo unsafe medical procedures.\textsuperscript{47} Problematically, it is unlikely for them to make informed decisions since they are not able to access to accurate information. Given the secrecy in the search engine business model, few users can verify that such rankings have not been manipulated or that subtler biases in favour of search engines’ partners have not been working into the search algorithm.\textsuperscript{48} From a utilitarian or consequentialist perspective, it is imperative for users to access some proprietary online information concerning health. Given the lack of reliable medical websites, information asymmetry of power between the Internet giants and the users has become more acute for Chinese patients. In accordance with Consumer Protection Law (CPL 2018), the right to know the goods and services is the basic right of consumers.\textsuperscript{49} In this regard, Baidu has a legal obligation to make aspects of these algorithms more transparent to the public. Medicine is at stake with patients’ life safety, largely because counterfeit medicines sicken ill patients and contribute to the emergency of drug-resistant strains of viruses.\textsuperscript{50} It is worth looking at the U.S. experience in dealing with the online ads on medication.

C. Can the U.S. Model be Transplanted into China’s Governance Regime?

The bid ranking mode was completely abandoned by the search industry as early as 2002 in the U.S. In 2002, the Federal Trade Commission (FTC) states explicitly that any listings that come as a result of bidding should be deemed advertising. The online pharmacies that put ads about medicine on Google must obtain Verified Internet Pharmacy Practice Sites (VIPPS), ads merchants of OTC must obtain the certification from the National Association of Boards of Pharmacy (NABP).

\textsuperscript{44} ‘Google Exit Appears to Benefit Top China Rival, Baidu’ \textit{The New York Times} (29 April 2010)
\textsuperscript{45} Austin Ramzy, ‘China Investigates Baidu after Student’s Death from Cancer’ \textit{The New York Times} (3 May 2016)
\textsuperscript{46} Frank Pasquale, ‘Internet Non-discrimination Principles: Commercial Ethics for Carriers and Search Engines’ (2008) 6 University of Chicago Legal Forum 263, 299
\textsuperscript{47} Angeline Ang, ‘Observations on the Protection of Chinese Consumer Rights in our Age of Misinformation’ (2016) 7 Singapore Law Review 6, 11
\textsuperscript{49} China Consumer Protection Law (CCPL 2018) Art.8
1. Statutory Approaches

SECs are viewed as “controllers of personal data,” as opposed to mere providers of a service; as such, these companies, as well as ISPs that operate in EU countries, can be held responsible/liable for the content that is accessible through their services. SECs must comply with official legal requests to remove content that explicitly violate U.S. laws. The Communications Decency Act (CDA 1996) applies to relationships between certain Internet intermediaries and rogue pharmacies that cause private injury to users. If a user searches for a drug online using a search engine, clicks on one of the results, submits financial information, and then gets illegally charged by the rogue pharmacy, the CDA 1996 protects the search engine from fraud liability as a publisher. The CDA 1996 avoids “chilling” communication transmitted by intermediaries, but its immunity provision does not incentivise search engines to monitor content more stringently. Section 230 generates a confusing circumstance where it remains unclear whether advertising services offered by search engines qualify for the immunity provisions.

The Digital Millennium Copyright Act (DMCA 1998) protects “passive” intermediaries, which transmit information automatically serving as a mere conduit, so long as the intermediary does not modify or cache the information. A search engine is eligible for the DMCA's protection only if it satisfies three conditions:

(i) the intermediary has no knowledge of the infringing material;
(ii) the intermediary does not receive a financial benefit from the infringing material;
(iii) upon notification, the intermediary responds expeditiously to remove the infringing material.

Ryan Haight Online Pharmacy Consumer Protection Act (Ryan Haight Act 2008) facilitates deterrence by prohibiting advertising or aiding illegal online sales of controlled substance. It further requires a valid prescription for drugs, defined as a prescription issued for a legitimate purpose by a practitioner who has conducted at least one in-person medical evaluation of the patient. The Ryan Haight Act 2008 prohibits to “knowingly or intentionally [. . .] aid or abet” the delivery, distribution, or dispensing of controlled substances via the Internet.

2. Google/Department of Justice Settlement

Online pharmacies had been allowed to operate without adequate supervision. Google’s failure to keep rogue pharmacies off its advertising also entails more stringent regulation. The Google’s motto was “Don't be evil”. One of Google’s three ranking principles is “no manual intervention”. The investigation by the U.S. Food and Drug Administration (FDA) in 2009 revealed the self-regulation was insufficient. Some rogue pharmacies are finding ways to

52 17 U.S.C. § 512(c)(1)
53 RHA § 3(f) and (g), 21 U.S.C. § 841(h) and 21 U.S.C. § 843(c)(2)
54 RHA § 309(e)
55 RHA § 3(f), 21 U.S.C. § 841(h)(1)
56 Anderson Cooper, ‘Google Braces for Huge Fine from Rogue Drug Ads’ CNN (1 July 2011)
57 Dirk Lewandowski, ‘Is Google Responsible for Providing Fair and Unbiased Results?’ in Mariarosaria Taddeo and Luciano Floridi (eds.) The Responsibilities of Online Service Providers (Berlin Heidelberg: Springer, 2017) 61-78
place ads for drugs online. Google knowingly took advertising money from websites selling highly addictive drugs without a legitimate prescription. The Department of Justice (DoJ) has investigated into Google’s display of advertisements from Canadian pharmacies which illegally sold drugs to American consumers. In a non-prosecution agreement (NPA) with the U.S. Department of Justice (DoJ) in 2011, Google agreed to pay U.S.$500 million (£380 million) earned from advertising counterfeit drugs. It has thus avoided prosecution. Google could have tainted its famous credo of “Don’t be evil”, had it been prosecuted by the government for knowingly endangering U.S. consumers. Much worse, it could also be debarred from bidding for any government contracts, which is arguably considered a corporate death sentence.

Google has implemented a rigorous third-party review and verification process that allows only licensed pharmacies and pharmacists to display advertisements in the U.S. For instance, there is no difference in essence between the “Sponsored Links” and “bid ranking”, whereas Google makes the “Sponsored Links” more distinguishable. On Google’s search result page, an “advertising” label tags each paid listing to distinguish it from natural search results. The legislators should have attempted to regulate SECs, which lead consumers to dangerous online pharmacies without the need for the banned advertisements. Making Internet drug sales illegal unless websites are licensed as legitimate Internet pharmacies addresses many of the issues surrounding these illicit activities. This would reduce the burden on law enforcement.

D. Baidu’s Legal Duties and Ethical Obligations

A search engine is committed to provide objective results on an impartial basis. Notably, SECs employ various techniques to exclude certain URLs from the results pages, where the content of web pages does not comply with the ethical guidelines of the search engine or the law. It plays a crucial role in accessing information. Legal and ethical issues arise in cases where search engines have provided links to Web sites whose content is either illegal or considered morally controversial. As a gatekeeper of the Web in the digital era, Baidu has both legal duties and ethical obligations due to its privileged place in China.

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58 Department of Justice (DoJ), ‘Google Forfeits $500 Million Generated by Online Ads & Prescription Drug Sales by Canadian Online Pharmacies’ (24 August 2011) <https://www.justice.gov/opa/pr/google-forfeits-500-million-generated-online-ads-prescription-drug-sales-canadian-online>
63 Jeff Karberg, ‘Progress in the Challenge to Regulate Online Pharmacies’ (2010) 23 (2) Journal of Law and Health 113, 142
1. **CSR-Orientated Issues**

Baidu’s pay-for-listing policy was ethically dubious. There are two types of accountability-related ethical concerns. First, corporate social responsibility (CSR) affects an important societal role SECs play in providing access to information. Second, SEC are liable for providing links to Web sites whose content is misleading, fraudulent and illegal. Given its aiding and abetting role, by no means should Baidu’s behaviour fall below the bottom line of its ethical obligation, which, otherwise, will be subject to legal sanctions.

(a) **Gate-Keeper’s Obligations with Due Diligence**

Search engines companies (SECs) are considered as gatekeepers of the Web, playing a crucial role in accessing information. They are naturally the usual “door of call” when reporting illegal content online, as they are also the main entrance door for that content. It could be argued that they are not publishers, but merely the proprietors of platforms and algorithms. Baidu’s gatekeeper role entails a social responsibility, which are morally accountable for their practices involving bias in the ranking of search results. Baidu is expected to be fully committed to social responsibility commensurate with its dominant status in searching engine area. The role of search engines, as advertisers, in facilitating rogue pharmacy traffic is untenable. Baidu has not been vigilant about safeguarding pharmaceutical ads because they are so lucrative. With a regard to the tragedy of Zexi Wei, Baidu has exercised insufficient gatekeeping obligations, wilfully turning a blind eye to such unethical behaviour. Due to its privileged place in China’s searching engine business, Baidu has a social responsibility and moral obligation to do no evil. Baidu should fulfil its gatekeeper role with socially responsible behaviour. It is obligated to taking up its social responsibilities to improve governance practices.

(b) **Moral Obligation vis-à-vis Legal Liability**

69 Robert Reich, ‘Resurrect Antitrust’ Project Syndicate (23 April 2020)
71 Dirk Lewandowski, ‘Is Google Responsible for Providing Fair and Unbiased Results?’ in Mariarosaria Taddeo and Luciano Floridi (eds.) The Responsibilities of Online Service Providers (Berlin Heidelberg: Springer, 2017) 61-77
72 Alyssa Abkowitz, ‘China’s Baidu Search Draws Unusually Loud Outcry after Student’s Death’ The Wall Street Journal (8 May 2016)
74 Shichuan Wang, ‘The Death of Zexi Wei: Challenge Corporate Ethical Responsibility’ People (1 May 2016)
75 Ralph Schroeder, Social Theory after the Internet-Media, Technology and Globalization (London, UCL Press, 2018) 101-125
Laws and regulations differ across jurisdictions. SECs may not be legally liable for the online content accessible through their services, provided they remove content that explicitly violate laws.\textsuperscript{77} If SECs comply with official legal requests to “de-index,” or remove links to, sites that they merely identify or provide links, they should not be held legally liable for any content that users happen to access via their services. However, SECs could be held liable for the content that is accessible through their services in the EU.\textsuperscript{78} Regarding the case of Zexi Wei, it is far beyond a somewhat intermediary liability as a normal SEC, it is more about Baidu’s ranking by bidding and failing to discern the authenticity of the higher-paid medication ads on its platform. In this vein, Baidu cannot be immune from being liable to the victim who has relied upon the search result. It faced serious legal challenges over its business model. Baidu should give up its paid search listings of particularly those of medical and pharmaceutical advertisers without licenses. Thus, it can strike a balance by protecting the interests of their shareholders to it also has legal and moral obligations, while simultaneously protecting its proprietary algorithms.

2. Legal and Regulatory Framework

Legal problems arise when the algorithm generates a combination of words that is capable of conveying a deceitful or misleading message. SECs are accountable for directing users to some Web sites whose content is either illegal or morally controversial. When the event of infringing consumers’ right cases occurs, they should bear joint liability with advertisers.\textsuperscript{79} As a unique jurisprudential phenomenon, regulations are normally legally binding in the Chinese juridical practice. It is worth being familiar with how its regulations deal with the thorny issue.

\textit{(a) Laws about Medication Advertisement}

Baidu should have obtained relevant authority’s approval in accordance with China's Advertisement Law (CAL 2015). In most countries, direct-to-consumer ads for prescription drugs are not permitted.\textsuperscript{80} Online ads for prescription medication are prohibited. Prescribed drugs can only be advertised in medical and pharmaceutical professional publications jointly named by health and drug supervision and administration departments of the State Council.\textsuperscript{81} This is echoed in the Chinese Drug Administration Law (DAL 2016) provides that the prescription medicine is not allowed to be advertised aimed at the public.\textsuperscript{82} However, the final version of the new DAL 2019 takes a more lenient approach to online sale of prescription drugs. The DAL 2016 forbids selling any prescription drug on a third-party online platform. But this restriction not been reflected in the Amended DAL 2019. It is possible that online distribution of prescription drugs becomes real at a certain point in the future. However, there is not any detailed guidance at present.

The CAL 2015 also provides that:

\textsuperscript{77} Title V of the Telecommunications Act of 1996; 47 U.S.C. § 230(c)(1)
\textsuperscript{79} China Advertisement Law (CAL 2015) Art. 56 (3)
\textsuperscript{81} China Advertisement Law (CAL 2015) Art. 15
\textsuperscript{82} DAL 2016 Art. 59; The China’s National People’s Congress (NPC) passed the amended Drug Administration Law (the Amended DAL) on 26 August 2019, which will take effect on 1 December 2019.
“advertisements for medicines and medical apparatuses shall be examined by relevant administrative departments before they are published and are prohibited from being published without examination.”

In addition, the Interim Measures for the Administration of Internet Advertisement (IMAIA 2016) also explicitly forbids the advertising of prescription medicine. IMAIA enhances the administration of digital ads for medical supplies and highlights the executive power of approval. Law enforcement agencies should take steps to block websites that breach these agreed basic professional standards. Furthermore, Advertisements for prescription drugs must indicate “the advertisement is intended for medical and pharmaceutical professionals only” conspicuously, and advertisements for non-prescription drugs must indicate “please follow the instructions or purchase and use the medicine according to a pharmacist’s suggestions” conspicuously. Accordingly, Baidu is supposed to be most stringently vigilant while verifying the qualification and screening for misleading adverts, such as medical services. In the digital era, holding providers accountable is an important component to addressing illicit online sales. They are obliged to monitor and shut down illegal advertisements shown on their platforms. It is argued that SECs should be liable for some websites with either illegal or immoral information accessible through its services. Pursuant to Advertisement Law 2015, an Advertising Operator should bear joint liabilities with the Advertiser. As a marketing tool, Baidu will have to ensure the authenticity of the posts, and otherwise be held accountable due to its joint aiding and abetting roles. Through promoting the false medical information, it aided and abetted the Beijing Police Hospital in perpetrating the fraud. Thus, Baidu should be jointly liable for the tragedy.

Advertising operators are subject to joint liability provided that they knew or ought to have known that advertising is false but still designs, produces, acts as agent, publishes, or recommends or testifies for it, in case the false advertisement causes detriment to the consumers. It is a plaintiff who bears the burden of proof. Despite Article 56 entailing joint liability under the China Advertisement Law (CAL 2015), rarely is Baidu held liable for its unethical behaviour because of the difficulty in gaining solid evidences. In the Google case, the Department of Justice (DoJ) secured solid proof that the searching engine giant had known the drug concern. Following the same reasoning, in the case of Zexi Wei, the plaintiff

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83 China Advertisement Law (CAL 2015) Art. 46
84 Interim Measures for the Administration of Internet Advertisements (IMAIA 2016) was promulgated by the State Administration for Industry and Commerce (SAIC) on 4 July 2016 and became effective on 1 September 2016. IMAIA 2016 Art. 5 (2)
85 IMAIA 2016 Art. 6
86 China Advertisement Law (CAL 2015) Art. 16
87 China Advertisement Law (CAL 2015) Art. 56 (2)
89 Anthony Li, ‘Whom to Trust When Sick?: The Wei Zexi Incident, the Chinese Internet, and the Healthcare System in China’ (2016) 4 China Perspectives 79, 83
90 Advertisement Law 2015 Art. 56
91 China Civil Procedure Law 2017 Art.64 (1)
92 Gabriel Wildau, ‘Baidu Probed after Student Death Sparks Outrage over Online Ads’ Financial Times (3 May 2016)
was supposed to prove that Baidu had or should have had the knowledge of the fraudulent information. With this conundrum in the way, it will be unfeasible to address Baidu’s bidding practice.\(^{94}\) Baidu would escape liability if the plaintiff fails to provide sufficient evidences to prove that it has or should have had the knowledge of the fraudulent advertisement. It is worth exploring whether it could be feasible to have the burden of proof reversed, say, imposed on a defendant. Since the Chinese government can exert great influence on companies, it is more realistic for a public organ to employ a more substantial leverage in striking the balance in terms of the onus of proof.

(b) Regulatory Framework

In the case of Zexi Wei, Baidu failed to perform its examination on the qualification of advertisers and published a series of medical institute advertisements that are not approved by the relevant administrative authorities. A particular concern in this case is regulation of cancer immunotherapy. The National Health and Family Planning Commission (NHFPC) confirmed explicitly on 5 May 2016 that immunotherapy has never been approved as a formal therapeutic tool for treatment in China. It follows that it is illegal for medication providers to offer it as a medical treatment. In addition, no assertions, guarantees for efficacy and safety, endorsements or testimonials are allowed in the advertisements for medical treatment, pharmaceutical products and medical devices.\(^{95}\) This is consistent with the CAL 2015, which provides that medical advertisements cannot include information about the medicine’s effectiveness, any unscientific assertions, or names or images of medical institutions, doctors or patients.\(^{96}\) Shanghai Administration for Industry & Commerce (SAIC)’s 2017 first batch of released cases regarding false advertising include one against Baidu Shanghai. Baidu was fined RMB¥ 28,000 (GB£3,100) in that case. The SECs are publishers of internet advertising and therefore bear the obligation to prevent and takedown false internet advertising. Although the fine may not have a strong deterrent role, it somehow incentivises Baidu to enhance administration on search engine advertising.

Furthermore, key word advertising and other advertising on search engines are categorised as internet advertising per the Interim Measures for the Administration of Internet Advertisements (IMAIA 2016).\(^{97}\) SECs are required to identify and label paid ads clearly, distinguishing them from regular search results and limiting the number of paid ads per page. According to China Advertisement Law 2015 (CAL 2015), published advertisements through the mass media should have advertising tags to distinguish from other non-advertising information so that consumers may not be misled.\(^{98}\) Consistently, the Interim Measures for the Administration of Internet Advertisements (IMAIA 2016) expressly provides the same

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\(^{94}\) Kathrin Hille, ‘Baidu Faces Wave of Legal Challenges’ *Financial Times* (30 November 2008)


\(^{96}\) China Advertisement Law 2015 (CAL 2015) Art.16

\(^{97}\) *Interim Measures for the Administration of Internet Advertisements* (IMAIA 2016) was promulgated by the State Administration for Industry and Commerce (SAIC) on 4 July 2016 and became effective on 1 September 2016. IMAIA 2016 Art.3

\(^{98}\) Advertisement Law 2015 Articles 14 & 59
requirement. In contravention of the above laws and regulations, Baidu has shown paid search results without marking them clearly as advertisements.

(c) Institutional Void: Law and Regulation in Place ≠ Efficient Enforcement

The tragedy may not attribute entirely to the lack of oversight, but to the institutional void, of which the theory may account for China’s governance failure. The dysfunctional governance results from the institutional void. Laws and policies were in place to limit malpractices, but were not implemented in practical situations. The current tacit or even express profiteering of illegal drug sales would therefore be actionable, both civilly and criminally. The government should be vigilant to hold accountable companies who in their bid for profits violate China Advertisement Law (CAL 2015) and put at risk the health and safety of consumers. Wei’s death led many to blame Baidu for its evil practice, which allowed healthcare providers to pay large sum for highly-ranked advertisements on its site. Baidu is socially irresponsible for this unethical behaviour from a perspective of the institutional governance. It is institution that works more efficiently to deter unethical and unlawful practice in the search engine business. Problematically, Baidu has exerted little effort to ensure that online drug sellers from which it obtains advertisement revenue are legitimate. It is essential to create SECs’ accountability for their facilitating illegal online activity, although the law and regulation may not be able to substantively address key issues associated with online drug sales.

3. Feasibility of Imposing Criminal Liability on SECs

One may argue that it is significant to establishes criminal penalties for all parties, including websites, search engines, and health care providers, who engage in and facilitate this harmful activity. In particular, it would be feasible to create criminal offenses and strong penalties for search engines which participate in facilitating and engaging in the dangerous activity of illegally selling drugs online. This will require a combination of legislation review and law enforcement, each of which poses considerable challenges. It remains uncertain as to whether it would be disproportionate to impose criminal liability on those SECs deploy technological schemes to manipulate search results. Other concerns arise as well. For instance, would the imposition of criminal liability cause unintended chilling effect on SECs? Would it be possible to put SECs in a disadvantaged position in terms of their potential global competitiveness in the artificial intelligence (AI) era? Without the deferred/no-prosecution agreements used in the U.S. legal system, a further feasibility study may need to be undertaken prior to the introduction of criminal liability.

E. Multipronged Approaches to Address the Challenge: Shield Consumers from the Harm of Inaccurate Advertising

99 *Interim Measures for the Administration of Internet Advertisements* (IMAIA 2016) was promulgated by the State Administration for Industry and Commerce (SAIC) on 4 July 2016 and became effective on 1 September 2016. IMAIA 2016 Art. 7

Given the increased exposure to online advertisements, it is imperative to explore more comprehensive approaches that could keep patients out of harm’s way. Apart from promoting SECs’ sustainable and equitable practices, it is also essential to enhance consumers’ awareness in terms of taking advantage of the online search and purchase. It is of the same significance to address the challenges through the public and private collaboration under China’s top-down governance model.

1. **International Standard and Awareness-Building Campaigns**

Internet drug sellers pose a serious global health concern that has generated both international and domestic attention. Current incentives and penalties are ineffective and limited in addressing the harms associated with illicit online drug sales. The pharmaceutical industry has a direct impact on people’s physical health, so there should have much more rigorous restrictions and reviewing standards for them. Due to the lack of consensus upon the nature of promotion via “Rating by Bidding”, there is not an international standard to address the issue of search-engine integrity. The ubiquitous nature of the internet requires a multinational approach to thwart the activities of those operating from countries where no relevant legal provisions are in place.

As for so many public health issues, raised awareness of the hazards will be crucial.\(^{101}\) It is essential to strengthen consumers’ awareness about the pitfalls of consuming drugs online through vigorous campaign. It would thus be helpful if the medical profession were to be more vigilant in warning patients about the dangers of seeking medical treatment via unregulated means before patients are inclined to do so. To maximise impact, efforts may need to be concentrated in areas with a high density of private hospitals. In the long term, awareness enhancement will have the added benefit of inculcating a sense of personal responsibility among Chinese consumers, ensuring that they thoroughly research medical products before purchase.\(^{102}\) This would alleviate the burden on China’s burgeoning healthcare system and improve China’s international image.

2. **Long-Termism vis-à-vis Short Termism: Pursuing a More Sustainable Way**

SECs profit from illicit drug sales from unverified websites. The paid price listing affects both companies and users. When an SEC is run in largely unconstrained and unaccountable ways, it is likely to achieve its profit maximisation, whereas the resultant victim will be damaged most. In the short term, Baidu secures huge profit by manipulating corporate reputation as an unethical media.\(^{103}\) In the long run, the paid bidding ensconced behind a corporate veil distorts the public trust.\(^{104}\) Intervened manually, the search pages’ pattern made up by the ranking links would impact corporate reputation. Listed on the NASDAQ since 2005, Baidu has

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101 US Food and Drug Administration (FDA), ‘Buying Medicines and Medical Products Online’ <http://www.fda.gov/buyonline/>
103 Gabriel Wildau, ‘China's Baidu hit by false ads, porn and medical advice scandal’ Financial Times (17 January 2016)
104 Min Jiang, ‘The business and politics of search engines: A comparative study of Baidu and Google’s search results of Internet events in China’ (2014) 16 (2) New Media & Society 212, 233
suffered not only from its stained reputation, but also plummeted share price by 7.9% on the Nasdaq.105

(a) Differentiate Paid ads from Natural Search Results

Baidu should provide most equitable way for users to find what they are looking for, which is commensurate with its status as the leading Chinese language Internet search provider. It is required to identify and label paid ads clearly, distinguishing them from regular search results, as well as limiting the number of paid ads on each page. To control the ratio of advertisements in the search page, it should limit number of advertisements per page and enforcing higher standards for advertisers with due diligence. The approach will reshape an equitable searching integrity.

(b) Robust Third-Party Verification Scheme

The verification theoretically requires a valid pharmacy license in China. It, however, does not show its teeth in practice, which has much less stringent requirements. Baidu, although purportedly requiring verification of Internet medical service providers, still allows and profits from illicit drug sales from unlicensed hospitals. Following Google’s experience, a stringent verification programme should be adopted with additional scrutiny for medical advertisers.

(c) Embed Checks and Balances into the Corporate Culture of Governance

SECs need to be more vigilant to check the qualifications in medical services. The infringement reports of bid ranking and false advertising promotion by Baidu illustrated some gaps in legal regulation. An adequate system should be in place to review stringently documentary evidences, such as a business license. The revenue may grow at a slower pace given Baidu limits sponsored links and filters advertisements to meet the regulatory requirements. In the long term, Baidu will benefit from a respectable online and offline ecosystem.

Ethical practices improve users’ trust and benefit the company in the longer term. Building trust among users will be critical for growth in future. A multilateral approach is needed to achieve a sustainable development. Otherwise, it is likely to be ineffective unless supported by campaigns through the media, internet search engines and service providers. In the context of selling medical service, it is vital to break the chain of demand from vulnerable patient populations and illicit online sellers. There is a dialectical relationship between profit maximisation and corporation social responsibility. It is argued that the latter does not necessarily impede the growth of profit but facilitate a corporate success sustainably and strategically.

3. The State’s Duty: Make Efficient Use of China’s Top-Down Governance Model

105 Gabriel Wildau, ‘Baidu Probed after Student Death Sparks Outrage over Online Ads’ Financial Times (3 May 2016)
Without the intervention of the public authority, the corporate social responsibility (CSR) will decline in the searching engine business. The government can play an indispensable and complimentary role in facilitating a meaningful change in pursuing integrity in the search engine business. This holds particularly true in China’s top-down governance model. China engages in public-private collaboration, forming a partnership between Baidu and the State Food and Drug Administration (SFDA) to provide online certification and search results identifying legitimate online pharmacies.107 There is also a need to redefine, in the internet age, what constitutes a doctor–patient consultation, in what circumstances this can occur online and whether this can lead to a valid prescription.108 These measures would tackle the root cause of the problem of misleading advertisements more effectively than imposing restrictions on Web giants like Baidu, which can hardly be expected to possess the expertise necessary to vet healthcare advertisements.

Conclusion

The law and ethics of advertising via internet and compliance remain highly debated in the digital era. The mere marked sign of ads or the bid logo cannot address the issue fundamentally. More multipronged approaches will work to treat the cause, not the symptom. At a macro level, a root cause of the tragedy does not merely lie in Baidu’s monopoly position. In dealing with the structural problem of China’s underfunded healthcare system, the private operators have crept in to fill the vacuum. The tragedy just revealed the inadequate governance and the lack of systematic resilience in response to the cyber challenges. At a micro perspective, Baidu need to strike a proper balance between the function of searching information and advertising issuing. In terms of SEC’s commitment in social responsibility for consumers, Baidu need to do a more rigorous examination and reviewing advertisers’ qualifications. Substantive controls must be in place to prevent unlicensed online pharmacies from advertising. SECs face some critical challenges with respect to fulfilling their “gatekeeper role” in a socially responsible way, while simultaneously protecting both their proprietary algorithms and the interests of their shareholders to whom they also have legal and moral obligations.