CrossMark

Variability of death penalty attitude in China: an empirical test of the Marshall hypotheses

Bin Liang^{1,2} · Jianhong Liu³ · Hong Lu⁴

Published online: 28 January 2019 © Springer Nature B.V. 2019

Abstract

Though empirical studies of the Marshall hypotheses are rich, few examined the hypotheses in non-US nations. Based on a sample of 1077 students and a quasi-experimental design, this study tests the Marshall hypotheses in China. Except the control group, three intervention essays (on 'international trend', 'wrongful conviction', and 'deterrence') were provided to three experimental groups and students' opinions were surveyed afterwards on capital punishment overall and six specific capital offenses. The results showed that the majority of Chinese students favored capital punishment and the wrongful conviction essay helped significantly reduce students' support in the overall death penalty opinion, consistent with the Marshall hypotheses. Nevertheless, the international trend and deterrence essays boosted students' support when opinions on specific capital offenses were surveyed, producing a counter-effect. Consistent with the hypotheses, students with a retribution belief were more likely to favor capital punishment and less likely to be swayed by essay interventions.

Bin Liang bin.liang@okstate.edu

> Jianhong Liu jliu@umac.mo

Hong Lu hong.lu@unlv.edu

- ¹ Department of Sociology, Oklahoma State University-Tulsa, 700 N. Greenwood Avenue, Tulsa, Oklahoma 74106, USA
- ² Department of Sociology, Oklahoma State University–Tulsa, 700 North Greenwood Avenue, Main Hall, 2223, Tulsa, OK 74106, USA
- ³ Department of Sociology, University of Macau, Room 3002, Social Science Building E21, Avenida da Universidade, Taipa, Macau, China
- ⁴ Department of Criminal Justice, University of Nevada-Las Vegas, Las Vegas, NV, USA

Introduction

There have been extensive studies on public opinion on the death penalty in Western nations (especially in the United States as one major user of capital punishment). These studies covered a wide range of topics such as the extent of public support based on survey and poll data [1], the rationales for people's support [2–4], factors that influence people's support [5, 6], and potential impact of public opinion on death penalty practice [7]. Overtime, scholars have come to a consensus that the oversimplified abstract question utilized in the polls (e.g., "Do you favor or oppose the death penalty for persons convicted of murder?") is often problematic and misleading and fails to

uncover the complexities of public opinion [8, 9].

One particular line of scholarly inquiry in this field is whether people's attitudes may change given new knowledge or information, and this is most typified by the famous Marshall hypotheses. In *Furman v. Georgia*, 408 U.S. 238 (1972), Justice Marshall suggested that American citizens would be subject to reasoned persuasion and strongly believed that the majority of American citizens would oppose the use of capital punishment once they become informed about the flawed American death penalty system. A rich body of literature has been built since then to test the Marshall hypotheses empirically, and the overall results are mixed and inconsistent (see review below).

Compared to the Western literature, empirical research on China's public opinion on the death penalty is very limited (see review below). As the leading user of the death penalty in the world, China has never conducted a national poll on citizens' opinions on the death penalty (not to mention a referendum) [10], but often claims "overwhelming public support" to buttress its use. A small number of survey studies seemingly lent support to the claimed 'majority public support' (see review below). Nevertheless, whether Chinese citizens are subjected to reasoned persuasion with information about potential flaws of China's death penalty practice has never been examined.

From a comparative perspective, only two studies tested the Marshall hypotheses in non-US nations [11, 12]. In this study, we aim to empirically test the Marshall hypotheses in China, and we argue that China is an ideal setting to test the Marshall hypotheses for three primary reasons. First, the Marshall hypotheses have not yet been tested in a non-Western, developing nation. Though Sato's study (2014) examined Japanese citizens' opinions, Japan is a developed nation and more comparable to Western developed nations. By contrast, despite its economic boom in the last four decades, China is a huge nation with economy unevenly developed within the nation. Moreover, China's long history of death penalty use and its cultural and traditional emphases on retribution and heavy penalty in governing society all have had significant influence on its death penalty practice overtime. Politically, the non-democratic governance by the Chinese Communist Party since 1949 has further entrenched the use of the death penalty as a tool both for crime-fighting and political purposes (e.g., [13, 14]). China's status as a non-Western, non-democratic, developing nation with a long history of death penalty use therefore presents a unique case to the Marshall hypotheses.

Second, the sheer size of China's population and its frequent use of capital punishment warrant an examination whether Chinese citizens are subject to reasoned persuasion. To date, data on China's use of the death penalty is still 'state secret', and the Chinese general public is little informed about the actual death penalty use, its domestic effect, and the international trend of death penalty abolition. It would be interesting to see if the Chinese views on the death penalty would be affected if the public is better informed with relevant information. This is particularly important and timely given China's legal reforms in the new century, especially on the use of the death penalty [15]. It is also worth noting that public opinion is playing an increasingly important role in China's legal reforms and judicial decision-making due to the emergence of the Internet and new means of social media (e.g., [16]). Whether the public can be better informed and whether the informed public would change their position on the death penalty is thus of a significant concern, both theoretically and practically.

Third, all previous testing of the hypotheses was limited to people's death penalty opinion on homicide. In China, despite gradual reduction of the total number of capital offenses in the last a few decades [15], the Ninth Amendment of China's Criminal Law in 2015 still makes the death penalty available for 46 offenses. A test in China would be able to examine whether Chinese citizens are subject to persuasion in a broad range of capital offenses (including non-fatal, non-violent crimes), a significant addition to previous studies.

Based on a sample of 1077 students and a quasi-experimental design, this study tests the Marshall hypotheses in the Chinese context. In the remaining of the paper, we first discuss the Marshall hypotheses and review past empirical studies. Next, we briefly review studies on China's public opinion on the death penalty and lay out the setting for our testing. Then we discuss our data and research design, and present main findings. Lastly, we draw implications of our study and discuss its major limitations.

Marshall hypotheses & its empirical testing

In Furman v. Georgia, 408 U.S. 238 (1972), Justice Marshall proposed his hypotheses for the first time. Concurring with the majority opinion, he found that the death penalty constituted "cruel and unusual" punishment because "it is excessive and serves no valid legislative purpose" (i.e., there lacks effective deterrence effect) and "it is abhorrent to currently existing moral value". Justice Marshall opined that "whether or not a punishment is cruel or unusual depends, not on whether its mere mention 'shocks the conscience and sense of justice of the people,' but on whether people who were fully informed as to the purpose of the penalty and its liabilities would find the penalty shocking, unjust and unacceptable." Given that "American citizens know almost nothing about capital punishment", Justice Marshall believed that knowledge of certain facts is "critical to an informed judgment on the morality of the death penalty". Specifically, he pointed out a number of key facts about American capital punishment including its lack of deterrence, its high costs, its likelihood of further stimulating criminal activities, its discriminatory use, death row inmates often being model prisoners, and potential wrongful convictions. Justice Marshall concluded that "assuming knowledge of all the facts presently available regarding capital punishment, the average citizen would, in my opinion, find it shocking to his conscience and sense of justice. For this reason alone capital punishment cannot stand." 4 years later, when the Supreme Court revived American capital punishment in Gregg v. Georgia, 428 U.S. 153 (1976), Justice Marshall again mentioned his hypotheses as a dissenter. He argued that the enactment of new death statues by 35 state legislatures since Furman cannot be conclusive about public opinion. He cited an empirical study [17] and restated his hypotheses that American people are not informed and if they were better informed they would consider capital punishment "shocking, unjust and unacceptable". Despite his belief, Justice Marshall recognized that an informed decision may not lead to people's attitude change if the basis for their support is due to retribution, thus a key qualification to his prediction. Nevertheless, he rejected retribution as a legitimate reason for one's death penalty support as it violates human dignity in its purest retributive sense against the Eight Amendment.

As pointed out (e.g., [18]), the Marshall hypotheses can be separated into three parts: (H1) American citizens know little about the actual practice of capital punishment, (H2) exposure to knowledge (i.e., becoming well informed) would help people oppose capital punishment, and (H3) such exposure would have little effect on those who support capital punishment for retributive reasons. As the first hypothesis is a fact-based question (whose support is "virtually undeniable", [18]: 845) and the third one could be viewed as a condition of the second one, the gist is the second one (often being named the Marshall hypothesis). Our review of empirical studies of the Marshall hypotheses below focuses on testing of the second (and the third if included), and leaves out survey studies that *only* covered the first hypothesis (e.g., [8]).

To date, close to 30 empirical studies have been published to examine the effect of the Marshall hypotheses, and the overall results are inconsistent and mixed.¹ On one hand, a number of studies lent support to the hypotheses and showed that information (exposing the myths and flaws of capital punishment) could have helped lower people's support for capital punishment [11, 12, 17, 18, 21–28]. With a few exceptions [12, 18, 28], nevertheless, most of these studies failed to produce the 'majority opposition' as predicted by Justice Marshall. On the other hand, many other studies gained no support of and some even openly contradicted the hypotheses [29-34]. For instance, in a number of studies [19, 20, 35], when presented with new information, research subjects seemingly 'absorbed' biased information based on their initial position toward capital punishment (the so-called 'biased assimilation'), and the results further polarized the positions of the opponents and proponents (the 'polarization effect'), thus contradicting the hypothesis prediction. Besides these two opposite groups, a number of studies found mixed results and gained only partial support for the hypotheses [36-41]. In Lee et al. [42], for instance, after completing a death penalty class, students' increased knowledge did not help reduce their support for capital punishment, but did help increase their support for an alternative (LWOP) over capital punishment. In recent years, scholars paid special attention to variations of geography [34] and individual and group identities such as race, ethnicity and gender [38-40] and showed that these features may have had an impact on the outcomes of the testing.

Three studies tested potential long-term effect of the 'informed knowledge'. While Sandys' study [28] found that the initial impact of the class remained after 1 year, research by Bohm and his colleagues [43, 44] failed to find any long-term effect when

¹ A few of these studies did not test the effect of information on one's *overall opinion* toward the death penalty, but on other things such as reasons for and factors associated with one's support of capital punishment (e.g., [19, 20]) and one's belief in fair application of capital punishment [21]. Careful interpretation is cautioned, though they can be viewed as general tests of the Marshall hypotheses.

students' overall death penalty opinion in follow-up years rebounded to near their initial positions before taking the class.

Compared to H2, tests on H3 are much less frequent. Though more studies lent support to H3 [17, 36, 40, 42], a couple of studies showed that even retributionists may be subject to change [24, 37].

Methodological challenges to empirical testing continue to exist. In particular, the effect hinges upon the 'stimulus' (i.e., the form that knowledge takes) and the 'delivery' in one's design (i.e., the way knowledge is imparted to subjects). Past studies relied primarily upon three forms of stimuli and delivery. In the first group, an essay or a group of essays were utilized as the stimuli. For instance, Sarat and Vidmar [17] drafted two 1500 word essays (one on humanitarian aspect of the death penalty and the other on utilitarian aspect) and randomly assigned research respondents to one of four essays: (1) the utilitarian essay, (2) the humanitarian essay, (3) an essay with combined utilitarian and humanitarian information; or (4) an essay entirely unrelated to death penalty issues (control group). Though their study confirmed the effect of the new knowledge (as predicted by the hypotheses), they expressed concerns about the condition of the provided information (brief essays without time to reflect on or discuss in any depth the issues raised in the essays).

In the second group, a number of factual statements (even briefer compared to essays) were utilized as the stimulus. Again, concerns about insufficiency of such intervention were expressed and scholars acknowledged that this is not what Justice Marshall had in mind (e.g., [30, 34]). Three other studies utilized multiple sources such as reading, presentation, and discussion to enhance the effect of the stimuli in their design [11, 12, 32], but their experiment was not covered by a full class.

Arguably, the third group provided a better intervention, in which scholars managed to test the effect of information provided in a death penalty class. Such classes were able to cover a broad range of information in an extended period of time with opportunities for students to discuss and reflect upon provided knowledge. The results of such class intervention again were inconsistent, which led to questions about classroom instruction as an effective means for changing people's death penalty opinions (e.g., [44]). Specific concerns were raised about the influence of the instructors [20, 22, 28, 37, 43], students' non-learning in classroom [27, 42], and the 'self-selection' bias given that students cannot be randomly assigned into a death penalty class and/or a non-death penalty class.

Another methodological challenge is the nature of one's sample. Most studies utilized small (in size), nonrandom, convenient student samples in which Criminal Justice majors made up a significant, if not exclusive body of the samples (e.g., [24, 29, 30, 38, 40]). A few studies showed that Criminal Justice majors tend to have a higher rate of death penalty support than other majors [33, 34]. Only three studies [11, 17, 21] managed to include random samples of non-students to date.

Studies of China's public opinion on death penalty

Though China has never polled its citizens' opinions on capital punishment, scholars have paid increasing attention in recent years to the role of public opinion (*minyi*) and analyzed how minyi may have influenced China's death penalty practice. Such studies

can be grouped into two major categories, one focused on quantitative survey studies and the other on qualitative studies of specific death penalty cases. For the latter, the presentation of minyi is often spontaneous and erupts when a controversial case breaks out [10, 45–47]. Fu [48], for instance, labeled it "penal populism". As Fu argued, different from that of the United States, Chinese penal populism often targets individual cases and tries to influence judicial sentencing instead of legislation and/or governmental policies. Facing pressure from this form of minyi, Chinese courts are in a difficult position to uphold the law and answer minyi at the same time [49, 50]. Moreover, the impact of such minyi on cases is very unpredictable, as it is influenced by other factors such as the media, judicial policies and rulings, and actions by administrations [51, 52].

Compared to the Western literature, quantitative survey research on China's public opinion is very limited (see summaries by [53, 54]), and almost all of them suffered from questionable survey designs and/or non-representative/non-random sampling. For instance, Jiang [53] examined 13 studies derived from 10 surveys, and only one of them managed to utilize a random sample, while others turned to convenient college student samples. Despite such limitations, these survey studies collectively displayed a number of common features. First, these studies confirmed China's majority support for the death penalty, and such support covered a variety of capital crimes including nonviolent and non-lethal crimes. In a few comparative studies [55–58], Chinese respondents reported even higher levels of support for capital punishment than their counterparts in other countries. Nevertheless, the support rate varied across different capital crimes, which could carry important policy implications. For instance, in Zhao's study (2015), a hypothetical case of organizing prostitution (a capital crime in China) was presented to survey respondents who were asked to choose their preferred punishment. Only 4.1% chose the death penalty.

Second, past survey studies showed that major justifications of punishment such as deterrence, retribution, and incapacitation are all embraced by Chinese respondents, consistent with Western research. However, the priorities assigned by Chinese respondents to these justifications may vary and be different from that of Western counterparts. For instance, in several studies [56, 59, 60], deterrence had the strongest impact on Chinese respondents' death penalty support, compared to retribution for American respondents.

Third, among demographic variables, some significant predictors related to people's support for capital punishment in Western studies also gained support in China, such as one's victimization experience and fear of crime (e.g., [58]). Interestingly, the support levels by Chinese legal professionals and governmental employees seem to be higher than that of the general public [61, 62]. Given that legal practitioners possess more knowledge about death penalty practice, it raises question on if increased knowledge may lower people's support in China [53]. In contrast, the impact of Chinese propaganda is evident. For instance, Oberwittler and Qi's study (2009) showed that the majority of respondents believed that China should not follow other nations in death penalty abolition. Rather, the decision be an issue of internal affairs, contingent upon China's national conditions.

In sum, this small body of literature showed an interactive relationship between the Chinese public (who occasionally try to influence the use of capital punishment in individual cases) and the government (who retains its use of capital punishment based on the support of the public). However, whether Chinese citizens are subject to reasoned persuasion as predicted by the Marshall hypotheses is never tested.

Testing Marshall hypotheses in Chinese setting

As the first empirical test of the Marshall hypotheses in China, our study is designed to test the following questions: (1) Do we see support for the Marshall hypotheses in China? (2) Does the specific content of new information (i.e., essay subjects) matter? (3) Does the effect of the new information, if any, vary dependent upon specific capital offenses?

In designing such a test, we have to take China's context into consideration. As a matter of fact, all methodological challenges (e.g., the 'form' and 'delivery' of knowledge, sampling issues) faced by scholars in the past studies are present in China, but with unique features. First, on the 'delivery' of the knowledge, though theoretically a better form of intervention could be a special death penalty class, an average citizen is unlikely to experience such in-depth intervention in reality [18], besides other methodological concerns discussed above. To our best knowledge, no such a class has yet been offered in China (probably due to the sensitive nature of the subject). Between the choice of factual statements and essays, we opt for the latter given its better length and depth on examination of a specific topic.

Second, on the 'form' of knowledge, despite a broad range of subjects suggested by Justice Marshall and previous studies that could be utilized to inform respondents, information on these subjects is extremely lacking in China as such information is often viewed 'state secrets'. For instance, studies in the USA could question the deterrence effect, the cost-benefit effectiveness, and the racialized application of capital punishment based on empirical data. Such data unfortunately is non-existent (or unavailable publicly) in China. In this study, we choose to address three topics given China's unique context. In the first essay (titled "international trend"), we contrast the global abolition movement with China's excessive use of capital punishment, and emphasize the roles of international standards and potential problems created by China's death penalty practice. In the second essay (titled "wrongful conviction"), we focus on the effect of wrongful convictions. In recent decades, cases of wrongful convictions and executions have been exposed in China and caught serious attention from the government and the public (e.g., [63]). Previous studies in the USA showed that information on wrongful convictions could potentially change people's opinion on the use of capital punishment [24–26]. It would be interesting to see if similar results would be replicated in China given its salience in recent decades. In the third essay (titled "deterrence"), we discuss the presumed deterrence effect of capital punishment and the lack of empirical support. Besides retribution, deterrence has always been ranked high by respondents as one primary reason for their support of capital punishment. A few survey studies in China [56, 59, 60] found deterrence the top reason for Chinese citizens' support of the death penalty. It is critical to examine if Chinese citizens would be subject to reasoned challenge on the presumed deterrent effect of capital punishment. In all three essays, given the lack of information in China, we often turn to information in other nations (e.g., the USA) to contrast with China. Granted, an argument built upon information from other nations is probably not as persuasive. It is reasonable, therefore, to expect different effect between the wrongful conviction essay (a well-publicized topic in China) and the other two essays. Each essay carries about 800 words, and each was pilot-tested before included in the final survey. In designing essays, we were fully aware of the significance of cultural differences among different nations, and presented only facts based on the best available information and avoided being argumentative (see Appendix for English translations of the essays).

Third, to test variations across diverse capital offenses in China, we categorize them into six groups, including murder, rape, drug trafficking, other violent crimes (causing human death such as assault and robbery), non-violent crimes (without human death such as organizing prostitution and espionage), and corruption. Degrading in severity, our design tests if there is different effect of the informed knowledge on various capital crimes.

Data & Methodology

Data in this study was collected on a branch campus of a Normal University in Southern China with an average of 30,000 student enrollment in 2017. This University was conveniently selected due to our professional connection with the host institute, and all survey respondents were students of the University. As this was a China-based research project, our collaborative research partners in China submitted, revised and received approvals of the survey questionnaires from both the administrative authorities at the host university and the local Department of Education, following general principles of protecting research subjects similar to the IRB in the United States. We further revised questionnaires based on their recommendations (e.g., removing some initial questions deemed sensitive or intrusive to students). All proper procedures were followed to ensure beneficial interests and no harm to students. Upon approving our research, the host university helped facilitate the execution of the survey (mainly through the University Student Organization²). The principles of the informed consent and confidentiality were explained to the students before the administration of the survey and they are also printed on the first page of each questionnaire. All questionnaires were anonymous with no traceable identifiers to ensure confidentiality.

All 12 colleges of the university were included in our sampling and about 100 questionnaires were distributed in each college with an initial target sample size of 1200. Specifically, college administrators selected what they judged to be most representative classes based on their general knowledge of students in each college. Besides detailed instructions, training was provided to ensure survey administrators to follow proper procedures. To further ensure randomness, four surveys (three with intervention essays (one essay per survey), and one survey without any essay (the control group)) were randomly distributed to survey administrators before they distributed surveys to respondents. Admittedly, this is not complete random sampling, and we did not have actual control over data collection (a limitation we discuss later). All questionnaires were administrate in classrooms with no presence of teachers but survey administrators. A total of 1077 valid questionnaires (a 89.8% response rate) were utilized in our

² All Chinese universities have an official University Student Organization (*xuesheng hui*) who is in charge of student affairs and is often much more powerful and influential compared to Western counterparts.

analysis below after removing incomplete or problematic surveys (e.g., all questions on a single page were answered '3').

Each survey consisted of five parts. In Part I, demographic information was collected. In Part III, questions were targeted at students' opinions on capital punishment and the rationales for their support, and their knowledge about capital punishment in China and the world. In Part IV, information about respondents' victimization experience, fear of crime, and their campus lives was collected. Unrelated to our research questions, Part II and V were not utilized in this study. Intervention essays were inserted between Part II and Part III. Presumably, any differences found in Part III (our main research interest) between the control group and three intervention groups would be due to the intervention of the essays. The survey contained a total of 105 questions, and it required an average of 25 to 30 min to complete.

Table 1 summarizes major demographic information. As shown in Column 1, among all students, 66.9% were females³ and two-thirds were either 18 or 19 years old, and 51.7% of students were local students; over 75% of respondents were freshmen, raising concerns about the representation of our sample. Since all 12 colleges of the University were covered, we witnessed a broad range of students' majors. As there is no criminal justice major in Chinese academia,⁴ we contrasted law majors (14.5% of our sample) with other (non-law) majors. Students' self-reported family economic status showed that almost 60% came from well-off (xiaokang) families, 13.7% from poor families (pingiong), and 26.5% from middle-class family background or better. Three other control variables were also included in Table 1, given their saliency in past studies [58, 60]. One's victimization asked "whether one suffered from a violent crime in the last 5 years" and 9.5% reported such experiences.⁵ The variables 'fear of crime' and 'retribution' asked respondents to rate their opinion on a 5-point likert scale (from 'strongly agree' to 'strongly oppose') if "they fear doing outdoor exercises alone" and "the death penalty is retribution (an eye for an eye) to criminals". Statistics in these variables were recoded into three categories as shown in Table 1. 51.8% of respondents expressed fear and 48.6% supported the retribution idea in our sample. Columns 2 to 4 break down data by four essay groups and allow us to examine any initial differences across groups. Overall, the data showed little significant statistical differences between the control group and other experimental groups, which seemingly indicated the effectiveness of our randomization. Only three significant group differences were found: compared to the control group, the international trend group had a significantly smaller proportion of law students (9.9% vs. 19.4%, $p \le .001$); the international trend group and the wrongful conviction group had higher proportions of students from better-off family background ($p \le .05$).

³ Normal universities in China (which aim to train future teachers at different levels) often have a high ratio of female students. We are informed that the particular Normal University of our study has a male-female ratio of 1:2.

⁴ Studies of criminal justice and criminology in China are mainly covered in two separate fields, in law school under the study of criminal law and criminal procedure law and in universities and colleges specialized in policing.

⁵ One other item measured one's property crime experience in the last 5 years. We tested it in our MLR models, and it was not significant in any of them.

All Groups ($n = 1077$)	No Intervention (258)	International Trend (272)	Wrongful Conviction (272)	Deterrence (275)
Sex: <i>n</i> = 1077	<i>n</i> = 258	n = 272	n = 272	n = 275
Male (0): 33.1%	M: 31.8%	M: 36.8%	M: 33.1%	M: 30.9%
Female (1): 66.9%	F: 68.2%	F: 63.2%	F: 66.9%	F: 69.1%
Age: <i>n</i> = 1057	<i>n</i> = 251	<i>n</i> = 266	<i>n</i> = 268	n = 272
≤18 (0): 22.3%	≤18: 24.7%	≤18: 19.9%	≤18: 25.7%	≤18: 19.1%
19 (1): 44.0%	19: 41.0%	19: 47.7%	19: 45.5%	19: 41.5%
≥20 (2): 33.7%	≥20: 34.3%	≥20: 32.3%	≥20: 28.7%	≥20: 39.3%
Grade: <i>n</i> = 1071	<i>n</i> = 257	<i>n</i> = 270	<i>n</i> = 271	n = 273
1st grade (0): 75.4%	1st grade: 77.4%	1st grade: 74.1%	1st grade: 77.5%	1st grade: 72.9%
Others (1): 24.6%	Others: 22.6%	Others: 25.9%	Others: 22.5%	Others: 27.1%
Major: <i>n</i> = 1077	<i>n</i> = 258	$n = 272^{***}$	<i>n</i> = 272	n = 275
Law (0): 14.5%	Law: 19.4%	Law: 9.9%	Law: 14.0%	Law: 14.9%
Others (1): 85.8%	Others: 80.6%	Others: 90.1%	Others: 86.0%	Others: 85.1%
Residency: $n = 1065$	<i>n</i> = 256	<i>n</i> = 267	<i>n</i> = 268	n = 274
Local (0): 51.7%	Local: 52.7%	Local: 48.7%	Local: 46.3%	Local: 59.1%
Out-of-state (1): 48.3%	Out-of-state: 47.3%	Out-of-state: 51.3%	Out-of-state: 53.7%	Out-of-state: 40.9%
Family economic status: $n = 930$	<i>n</i> = 218	$n = 234^*$	n = 238*	n = 240
\geq Middle-class (0):	≥Middle-class:	≥Middle-class:	≥Middle-class:	≥Middle-class:
26.5%	21.1%	26.5%	30.3%	27.5%
Well-off (1): 59.9%	Well-off: 59.2%	Well-off: 62.0%	Well-off: 58.4%	Well-off: 60.0%
Impoverished (2): 13.7%	Impoverished: 19.7%	Impoverished: 11.5%	Impoverished: 11.3%	Impoverished: 12.5%
Victimization: $n = 1002$	<i>n</i> = 237	n = 255	n = 245	n = 255
Yes (0): 9.5%	Yes: 8.4%	Yes: 8.6%	Yes: 11.0%	Yes: 9.8%
No (1): 90.5%	No: 91.6%	No: 91.4%	No: 89.0%	No: 90.2%
Fear of crime: $n = 1074$	<i>n</i> = 257	n = 272	n = 270	<i>n</i> = 272
Agree (0): 51.8%	Agree: 49.4%	Agree: 51.5%	Agree: 46.3%	Agree: 59.6%
Neutral (1): 26.3%	Neutral: 26.8%	Neutral: 24.6%	Neutral: 32.2%	Neutral: 21.5%
Disagree (2): 22.0%	Disagree: 23.7%	Disagree: 23.9%	Disagree: 21.5%	Disagree: 18.9%
Retribution: $n = 1073$	n = 255	<i>n</i> = 271	n = 272	n = 275
Agree (0): 48.6%	Agree: 47.5%	Agree: 52.4%	Agree: 45.2%	Agree: 49.1%
Neutral (1): 24.9%	Neutral: 24.3%	Neutral: 20.3%	Neutral: 30.9%	Neutral: 24.0%
Disagree (2): 26.6%	Disagree: 28.2%	Disagree: 27.3%	Disagree: 23.9%	Disagree: 26.9%

Table 1 Comparison of demographic & control variables by groups

Note: (1) the number of "Ns" varies due to missing values; (2) compared to the 'no intervention' group, significant chi-square test results were indicated: *p < 0.05, **p < 0.01, **p < 0.001

Testing of Marshall hypotheses

H1 To test Chinese respondents' knowledge, we crafted 13 factual statements (see Table 2), three on international practice (S1, 5, and 6), five on Chinese laws and policies (S2, 3, and 7–9), one on deterrence effect (S4), and four on China's wrongful convictions (S10–13). Respondents were asked to rate their opinion on a 5-point Likert scale on these statements, and we collapsed their answers into three groups (from 'agree'

Table 2 A list of factual statements

	Statements	Answers (based on best available information and the existing literature)
S1	Most nations in the world have abolished the death penalty and the number of the retentionists is getting smaller.	Correct
S2	China is not the largest user of the death penalty in the world.	Incorrect
S3	The number of capital offenses in China is identical to that of other nations.	Incorrect
S4	Research shows that capital punishment deters murder.	Incorrect
S5	Most developed nations still retain the death penalty.	Incorrect
S6	All European Union nations have abolished the death penalty.	Correct
S7	Based on China's Criminal Law, all homicides will receive the death penalty.	Incorrect
S 8	China's death penalty is only applicable to crimes that resulted in death of a victim.	Incorrect
S9	In the last decade, China's policy of "killing fewer, killing cautiously" reduced the number of capital offenses.	Correct
S10	In recent decades, China has witnessed a number of wrongful convictions and executions.	Correct
S11	China's 'strike-hard' campaign is one of the reasons for wrongful convictions.	Correct
S12	Adhering to the principle of "presumption of innocence" (i.e., finding the suspect not guilty with insufficient evidence) would help curb wrongful convictions.	Correct
S13	Use of torture is a major reason for wrongful convictions.	Correct

to 'oppose'). Depending upon each statement, students' answers indicated their correct or incorrect knowledge. Table 3 displays information on these statements across groups and allows us to examine (1) the overall knowledge level by respondents and (2) whether our intervention exhibited any discernable effect on the experimental groups.

On the overall knowledge level, respondents showed decent amount of knowledge, but such knowledge varies by subjects. On the subject of wrongful convictions, the majority of respondents got all four factual statements right, showing their awareness of such problems in China. In contrast, on the single question of deterrence, 58.6% of respondents supported the factually wrong statement (vs. 9.2% opposition), which showed their strong belief in deterrence. On subjects of international practice and Chinese laws/policies, the results were inconsistent. For instance, while most students (67.2%) correctly identified the declining trend of the death penalty use worldwide (S1), they were not aware that most developed nations and all EU nations have abolished capital punishment (S5–6). While most students correctly identified facts about China's domestic laws and policies (S7–9), they were not aware of China's relative status compared to other nations (S2–3). It appears that students' knowledge depends upon publicized information in China: while they

Statements (all)	No Intervention	International Trend	Wrongful Conviction	Deterrence
S1: <i>n</i> = 1075	<i>n</i> = 257	<i>n</i> = 272**	<i>n</i> = 271	n = 275
Agree: 67.2%	Agree: 61.5%	Agree: 75.0%	Agree: 66.4%	Agree: 65.5%
Neutral: 28.9%	Neutral: 34.6%	Neutral: 21.7%	Neutral: 30.3%	Neutral: 29.5%
Disagree: 3.9%	Disagree: 3.9%	Disagree: 3.3%	Disagree: 3.3%	Disagree: 5.1%
S2: <i>n</i> = 1076	n = 257	n = 272	<i>n</i> = 272	<i>n</i> = 275
Agree: 55.2%	Agree: 51.4%	Agree: 53.3%	Agree: 57.7%	Agree: 57.8%
Neutral: 37.1%	Neutral: 40.9%	Neutral: 33.5%	Neutral: 38.6%	Neutral: 35.6%
Disagree: 7.8%	Disagree: 7.8%	Disagree: 13.2%	Disagree: 3.7%	Disagree: 6.5%
S3: <i>n</i> = 1075	n = 257	n = 272	<i>n</i> = 272	<i>n</i> = 274
Agree: 38.1%	Agree: 39.3%	Agree: 40.8%	Agree: 33.5%	Agree: 39.1%
Neutral: 52.3%	Neutral: 53.7%	Neutral: 47.1%	Neutral: 57.0%	Neutral: 51.4%
Disagree: 9.6%	Disagree: 7.0%	Disagree: 12.1%	Disagree: 9.6%	Disagree: 9.5%
S4: <i>n</i> = 1074	<i>n</i> = 256	<i>n</i> = 272	<i>n</i> = 271	<i>n</i> = 275
Agree: 58.6%	Agree: 56.3%	Agree: 60.7%	Agree: 56.8%	Agree: 60.4%
Neutral: 32.2%	Neutral: 32.8%	Neutral: 30.5%	Neutral: 35.4%	Neutral: 30.2%
Disagree: 9.2%	Disagree: 10.9%	Disagree: 8.8%	Disagree: 7.7%	Disagree: 9.5%
S5: <i>n</i> = 1070	n = 256	n = 272**	<i>n</i> = 269	<i>n</i> = 273
Agree: 37.0%	Agree: 42.6%	Agree: 30.9%	Agree: 39.8%	Agree: 35.2%
Neutral: 39.4%	Neutral: 36.3%	Neutral: 37.1%	Neutral: 40.1%	Neutral: 44.0%
Disagree: 23.6%	Disagree: 21.1%	Disagree: 32.0%	Disagree: 20.1%	Disagree: 20.9%
S6: <i>n</i> = 1073	n = 256	n = 272*	<i>n</i> = 271	<i>n</i> = 274
Agree: 21.8%	Agree: 20.7%	Agree: 29.4%	Agree: 18.1%	Agree: 19.0%
Neutral: 60.9%	Neutral: 63.3%	Neutral: 51.5%	Neutral: 65.7%	Neutral: 63.1%
Disagree: 17.3%	Disagree: 16.0%	Disagree: 19.1%	Disagree: 16.2%	Disagree: 17.9%
S7: <i>n</i> = 1072	n = 255	<i>n</i> = 271	<i>n</i> = 272	<i>n</i> = 274
Agree: 20.6%	Agree: 19.6%	Agree: 24.7%	Agree: 19.1%	Agree: 19.0%
Neutral: 39.6%	Neutral: 40.4%	Neutral: 36.2%	Neutral: 41.2%	Neutral: 40.5%
Disagree: 39.8%	Disagree: 40.0%	Disagree: 39.1%	Disagree: 39.7%	Disagree: 40.5%
S8: <i>n</i> = 1074	n = 257	n = 272*	n = 271	<i>n</i> = 274
Agree: 26.5%	Agree: 24.5%	Agree: 33.1%	Agree: 24.0%	Agree: 24.5%
Neutral: 38.8%	Neutral: 41.6%	Neutral: 32.7%	Neutral: 41.0%	Neutral: 40.1%
Disagree: 34.6%	Disagree: 33.9%	Disagree: 34.2%	Disagree: 35.1%	Disagree: 35.4%
S9: <i>n</i> = 1073	<i>n</i> = 256	n = 272**	<i>n</i> = 271	<i>n</i> = 274
Agree: 59.6%	Agree: 54.3%	Agree: 66.2%	Agree: 59.0%	Agree: 58.8%
Neutral: 33.5%	Neutral: 37.5%	Neutral: 29.0%	Neutral: 32.5%	Neutral: 35.0%
Disagree: 6.9%	Disagree: 8.2%	Disagree: 4.8%	Disagree: 8.5%	Disagree: 6.2%
S10: <i>n</i> = 1074	n = 257	<i>n</i> = 272	<i>n</i> = 271	<i>n</i> = 274
Agree: 58.0%	Agree: 54.9%	Agree: 61.8%	Agree: 56.1%	Agree: 59.1%
Neutral: 33.1%	Neutral: 35.4%	Neutral: 28.7%	Neutral: 35.4%	Neutral: 32.8%
Disagree: 8.9%	Disagree: 9.7%	Disagree: 9.6%	Disagree: 8.5%	Disagree: 8.0%
S11: <i>n</i> = 1070	<i>n</i> = 256	<i>n</i> = 270	<i>n</i> = 271	<i>n</i> = 273
Agree: 45.5%	Agree: 41.8%	Agree: 46.7%	Agree: 45.4%	Agree: 47.6%

Table 3 Comparison of factual statements by groups

Statements (all)	No Intervention	International Trend	Wrongful Conviction	Deterrence
Neutral: 37.4%	Neutral: 42.6%	Neutral: 36.7%	Neutral: 35.4%	Neutral: 35.2%
Disagree: 17.2%	Disagree: 15.6%	Disagree: 16.7%	Disagree: 19.2%	Disagree: 17.2%
S12: <i>n</i> = 1074	<i>n</i> = 256	n = 272	<i>n</i> = 271	<i>n</i> = 275
Agree: 52.0%	Agree: 51.2%	Agree: 52.6%	Agree: 50.6%	Agree: 53.5%
Neutral: 34.5%	Neutral: 34.8%	Neutral: 36.0%	Neutral: 33.9%	Neutral: 33.1%
Disagree: 13.6%	Disagree: 14.1%	Disagree: 11.4%	Disagree: 15.5%	Disagree: 13.5%
S13: <i>n</i> = 1073	n = 257	n = 272	<i>n</i> = 271	<i>n</i> = 273
Agree: 62.3%	Agree: 59.5%	Agree: 62.5%	Agree: 61.3%	Agree: 65.9%
Neutral: 26.4%	Neutral: 28.4%	Neutral: 22.8%	Neutral: 29.5%	Neutral: 24.9%
Disagree: 11.3%	Disagree: 12.1%	Disagree: 14.7%	Disagree: 9.2%	Disagree: 9.2%

Table 3 (continued)

Note: (1) the number of "Ns" varies due to missing values; (2) compared to the 'no intervention' group, significant chi-square test results were indicated: *p < 0.05, **p < 0.01, ***p < 0.001

learned more about Chinese domestic laws/policies and wrongful convictions (openly publicized by the media), they knew little about international practices and empirical research on deterrence (rarely publicized).

The breakdown data across four groups to some extent confirmed our observation above and showed inconsistent intervention effect. Across all factual statements, no statistically significant differences were found with regard to the wrongful conviction and deterrence groups (compared to the control group). As a matter of fact, on all four wrongful conviction statements, statistics were very similar across all four groups. It shows the effect of media publicity on such problems in China and our further intervention (via the wrongful conviction essay) had produced little effect to increase their knowledge. On the single deterrence question, compared to the control group, a higher percentage of the deterrence group actually supported the factually wrong statement (60.4% vs. 56.3%, nonsignificant statistically), contrary to our hypothesis. In contrast, the impact of the international trend group was significant in five statements (all of which were explicitly discussed in the international trend essay): compared to the control group, the international trend group was more likely to identify correctly all three statements on international trend (S1, 5 & 6) and one statement on China's law (S9); on another statement of China's law (S8), compared to the control group, a higher percentage of the international trend group incorrectly answered the question (33.1% vs. 24.5%), while a slightly higher percentage correctly answered the question (34.2% vs. 33.9%), thus a perplexing result. Overall, exposure to information on the international trend seemingly educated students in our sample as expected.

H2 To test the effect of intervention essays on students' death penalty opinions, we first asked their overall opinion on China's capital punishment and then solicited their opinions on six specific types of capital offenses. The original answers based on a 5-point Likert scale were recoded into three groups (from "agree" to "oppose"). The statistics are presented in Table 4. Data consistently

Crime type	Groups	Support (%)	Neutral (%)	Oppose (%)	Chi-Square (compared to no intervention)
Overall, no distinction	All (<i>n</i> = 1072)	64.9	24.7	10.4	
	No intervention $(n = 257)$	65.0	28.0	7.0	
	International trend $(n = 271)$	64.6	24.0	11.4	3.625
	Wrongful conviction $(n = 270)$	63.3	23.3	13.3	6.331*
	Deterrence $(n = 274)$	66.8	23.7	9.5	2.001
Murder	All $(n = 1073)$	80.1	15.1	4.8	
	No intervention $(n = 257)$	76.3	18.7	5.1	
	International trend $(n = 270)$	82.6	13.3	4.1	3.302
	Wrongful conviction $(n = 271)$	81.2	13.7	5.2	2.476
	Deterrence $(n = 275)$	80.0	14.9	5.1	1.365
Rape	All (<i>n</i> = 1072)	75.2	16.4	8.4	
	No intervention $(n = 258)$	71.3	17.8	10.9	
	International trend $(n = 270)$	78.9	14.1	7.0	4.333
	Wrongful conviction $(n = 270)$	74.1	17.8	8.1	1.157
	Deterrence $(n = 274)$	76.3	16.1	7.7	2.156
Drug trafficking	All (<i>n</i> = 1073)	69.2	20.6	10.2	
	No intervention $(n = 257)$	66.1	18.3	15.6	
	International trend $(n = 271)$	70.8	21.8	7.4	8.997*
	Wrongful conviction $(n = 271)$	70.8	19.6	9.6	4.299
	Deterrence $(n = 274)$	69.0	22.6	8.4	7.120*
Other violent crimes	All $(n = 1074)$	61.6	26.9	11.5	
(causing death)	No intervention $(n = 258)$	53.9	31.8	14.3	
	International trend $(n = 271)$	68.3	23.3	8.5	11.975**
	Wrongful conviction $(n = 271)$	62.0	25.1	12.9	3.784
	Deterrence $(n = 274)$	62.0	27.7	10.2	4.107
Other non-violent crimes	All (<i>n</i> = 1073)	54.9	27.9	17.2	
(no death)	No intervention $(n = 258)$	54.3	26.0	19.8	
	International trend $(n=271)$	56.5	26.6	17.0	.695

Table 4 Students' death penalty opinions by capital offenses

Crime type	Groups	Support (%)	Neutral (%)	Oppose (%)	Chi-Square (compared to no intervention)
	Wrongful conviction $(n = 271)$	50.9	29.2	19.9	.767
	Deterrence $(n = 273)$	57.9	29.7	12.5	5.392
Corruption	All $(n = 1074)$	46.7	35.1	18.2	
	No intervention $(n = 258)$	42.2	38.0	19.8	
	International trend $(n = 271)$	53.1	29.9	17.0	6.399*
	Wrongful conviction $(n = 271)$	44.3	38.4	17.3	.551
	Deterrence $(n = 274)$	47.1	34.3	18.6	1.284

Table 4 (continued)

Note: *p < 0.05, **p < 0.01, ***p < 0.001

showed the majority support for China's death penalty: on their overall opinion, 64.9% of respondents supported capital punishment (vs. 10.4% opposition). Though respondents' support rate varied from one type of capital offense to another (ranging from a high of 80.1% in murder to 46.7% in corruption), only in corruption did the support rate drop below 50%. As expected, the respondent's support rate dropped lower when the capital crime became less severe. The same pattern held within each group (the control and three intervention groups).

Next, for each death penalty opinion variable (from overall opinion to corruption), we conducted cross-tab analyses between the control group and each of the intervention groups and reported chi-square results (last column). Five significant group differences were found, one from the wrongful conviction-control group comparison, three from the international trend-control group comparison, and one from the deterrence-control group comparison. Compared to the control group, the wrongful conviction group reported a lower support rate (63.3% vs. 65%) and a higher opposition rate (13.3% vs. 7%) in their overall opinion on capital punishment. As hypothesized, the information on wrongful convictions helped decrease respondents' support. In contrast, compared to the control group, the international trend group reported even higher support rates in three capital offenses (drug trafficking, other violent crimes and corruption), contrary to our hypotheses! It is not readily clear why the international trend essay produced such a counter-effect, especially when data in H1 seemed to show that respondents actually 'absorbed' well the new information overall. Compared to the control group, the deterrence group reported a higher support rate in drug trafficking, also contrary to our hypothesis. An examination of other comparisons which produced no significant group differences indicated another contrast: on students' overall opinion, compared to the control group, both international trend and deterrence apparently helped lower students' support and boost their opposition as predicted by the hypothesis; nevertheless, when students reported their opinions on specific capital offenses, our interventions seemingly boosted their support for the death penalty, thus the perplexing countereffect!

In Table 5, we run a series of multinominal logistic regressions (MLR)⁶ to test if the bivariate results in Table 4 would hold after other demographic and control variables are controlled. A total of seven models were run. In each model, MLR regressions produced results that contrasted both the 'support' and 'neutral' groups to the 'oppose' group (the reference group). Similarly, the last categories of all demographic and control variables were set as the reference groups.

As shown, interventions produced significant results only in two models: for students' overall death penalty opinion, compared to the control group, the wrongful conviction group was more likely to oppose the death penalty than to support it or be neutral; the international trend and deterrence groups were more likely to oppose the death penalty than to be neutral. The results were consistent with the prediction of the Marshall hypothesis. For the capital offense of drug trafficking, however, compared to the control group, both the international trend and deterrence groups were significantly more likely to either support or be neutral than to oppose the death penalty, contrary to the hypothesis!

Among demographic and control variables, the most consistent and strongest predictor is retribution, which produced significant results in all models. Students who held a strong retribution belief were significantly more likely to support or be neutral than to oppose the death penalty. The effect of other variables were inconsistent and model specific. Specifically, gender was significant in two models (murder and rape): compared to females, males were more likely to oppose the death penalty. Age was significant in three models (rape, drug trafficking, and other violent crimes): being older (20 and older as opposed to 18 or 19) was associated with a higher likelihood of death penalty opposition. One's major was significant in two models (murder and corruption): compared to other majors, being a law major was associated with a higher likelihood of death penalty opposition. Residency was only significant for other violent crimes: compared to out of state residents, local residents were more likely to oppose than support capital punishment. Fear of crime was significant only for non-violent crimes: compared to students who expressed no fear, students who expressed fear were more likely to support the death penalty. Finally, one's grade, family economic status and victimization experience produced no significant results in all MLR regressions.

H3 Results in Table 5 clearly showed a strong and consistent punitive influence of retribution on students' death penalty opinions. In Table 6, we ran cross-tab analyses of death penalty opinions by retribution, controlled by groups. Among all death penalty opinions, except three (the murder-no intervention group, murder-deterrence group, and non-violent crimes-deterrence group), all others produced significant chi-square results: compared to students who reported no retribution belief, students with a retribution belief reported higher support for (and lower opposition to) capital punishment. In three groups (the corruption-no intervention group, corruption-wrongful conviction group,

⁶ Given the fact that our dependent variables are ordinal level variables, we initially ran ordinal regressions. Nevertheless, in four of the seven models (on overall opinion, drug trafficking, other violent crimes, and corruption), the assumption of parallelism was violated at the .05 significance level. As a result, we opted for MLRs. The results of ordinal regressions (available upon request) showed that none of the intervention groups had a significant independent effect upon students' death penalty opinions. Results on demographic and control variables largely corroborated with the MLR results in Table 5.

apital Offenses
by C
Regressions
ogistic
Multinomial L
Table 5

	Overall Opinion						Murder					
	Support			Neutral			Support			Neutral		
	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	d.f.
Group International trend (1)	726 (.423)	2.944	_	-1.024 (.446)*	5.280	-	.302 (.543)	.310	-	.125 (.594)	.044	-
Wrongful conviction (2)	-1.008(.413)*	5.938	1	-1.406 (.438)***	10.291	1	.014 (.515)	.001	1	389 (.574)	.459	-
Deterrence (3) Gender	663 (.422)	2.471	-	-1.033 (.445)*	5.390	1	251 (.486)	267	1	260 (.536)	.236	-
Male (0)	469 (.278)	2.838	1	470 (.303)	2.394	1	714 (.377)	3.582	1	953 (.423)*	5.071	-
Age ~ 10 (1)	(017.7.002	1710	-	738 / 1400	272	-	1307 5660	170	-	(00 / 001	00	-
> 10 (1)	(714.) 200	2. /41		(6445.) 000-	coc.		(000.) 401.	100.		(070) 761-	c.40.	
19 (2) Grade	188 (.3/1)	1.57	-	.036 (.403)	800.	_	.381 (.481)	.626	_	(155.) 860.	.012	-
1 st Grade (0)	.406 (.374)	1.179	1	.209 (.408)	.261	-	.369 (.482)	.586	1	.406 (.535)	.576	-
Major												
Law (0)	.702 (.417)	2.845	1	.017 (.465)	.001	1	657 (.425)	2.391	1	-1.225 (.530)*	5.343	-
Residency												
Local (0)	342 (.262)	1.706	1	088 (.284)	960.	1	091 (.358)	.064	1	048 (.397)	.015	-
Family Economic Status												
≥Middle-class (0)	.337 (.439)	588	1	.665 (.481)	1.909	1	167 (.624)	.072	-	565 (.674)	.703	-
Well-off (1)	.346 (.390)	.787	1	.460 (.431)	1.137	1	.012 (.588)	000.	1	535 (.630)	.721	-
Victimization												
Yes (0)	.606 (.562)	1.160	1	.503 (.597)	.710	1	.410 (.769)	284	-	.792 (.810)	.956	-
Fear of Crime												
Agree (0)	.042 (.323)	.017	1	.084 (.358)	.054	1	.051 (.425)	.015	1	073 (.483)	.023	-
Neutral (1)	212 (.381)	.310	1	.217 (.411)	278	1	.414 (.546)	.573	1	.576 (.600)	.921	-
Retribution												
Agree (0)	2.350 (.325)***	52.339	1	$1.602 (.358)^{***}$	20.014	1	1.279 (.402)***	10.108	1	.825 (.454)	3.305	-
Neutral (1)	1.388 (.351)***	15.615	1	$1.889(.371)^{***}$	25.872	1	1.197 (.525)*	5.190	1	1.253 (.569)*	4.853	-
Intercept	1.312 (.623)*	4.441	1	.437 (.677)	.417	1	2.102 (.824)*	6.511	1	1.409 (.900)	2.452	-
N			832						831			
-2 Log likelihood			1125.39***						839.70*			
Nagelkerke R ²			.194						.081			

ued)
(contin
ŝ
Table

	Rape						Drug Trafficking					
	Support			Neutral			Support			Neutral		
	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	$d_{i}f_{i}$	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald a	d.f.
Group												L
International trend (1)	.474 (.398)	1.420	1	282 (.453)	389	1	.773 (.348)*	4.930	1	1.014(.408)*	6.189 1	_
Wrongful conviction (2)	.299 (.387)	.598	1	.307 (.436)	.497	1	.573 (.332)	2.979	1	.727 (.394)	3.414 1	_
Deterrence (3)	.400 (.384)	1.084	1	.356 (.435)	699.	1	.712 (.339)*	4.418	1	1.182 (.391)**	9.137 1	_
Gender ⁻												
Male (0)	747 (.295)*	6.388	1	467 (.333)	1.968	1	.309 (.278)	1.235	1	.019 (.320)	.004	_
Age												
≤ 18 (1)	.356 (.392)	.822	1	396 (.462)	.736	1	.499 (.387)	1.667	-	.501 (.439)	1.299 1	_
19 (2)	1.347 (.391)***	11.885	1	1.013 (.428)*	5.603	1	.710 (.330)*	4.641	1	.650 (.377)	2.968 1	_
Grade												
1st Grade (0)		687 (.390)	3.106	1256 (.437)	.345	1	264 (.342)	599	-	040 (.396)	.010	_
Major												
Law (0)	.342 (.422)	.658	1	.169 (.477)	.126	1	.215 (.378)	.324	1	.441 (.417)	1.118 1	_
Residency												
Local (0)	077 (.281)	.074	1	.095 (.317)	060.	1	.109 (.248)	.194	1	.187 (.283)	.437 1	_
Family Economic Status												
≥Middle-class (0)	450 (.488)	.849	1	442 (.541)	.666	1	373 (.456)	.669	1	654 (.506)	1.671 1	_
Well-off (1)	072 (.454)	.025	1	-267 (.501)	284	1	213 (.422)	.255	-	511 (.464)	1.216 1	_
Victimization												
Yes (0)	.281 (.570)	.243	1.143 (.635)		.051	1	167 (.443)	.143	1	199 (.508)	.154 1	_
Fear of Crime												
Agree (0)	.356 (.344)	1.071	1	.008 (.397)	.000	1	.444 (.303)	2.143	1	.411 (.358)	1.323 1	_
Neutral (1)	111 (.389)	.081	1	.332 (.431)	.594	1	205 (.353)	.338	1	.593 (.406)	2.135 1	_
Retribution												
Agree (0)	1.840 (.334)*** 30.349	1	1.295 (.377)***	11.778	1	1.480 (.288)*** 26.478	1	1.048(.333)**	9.889	1		
Neutral (1)		1.491 (.392)* 14.497	1	1.213 (.436)**	7.734	1	1.131 (.333)***	11.549	1	1.082 (.377)**	8.243 1	_
Intercept		1.214 (.636) 3.644	1	.059 (.721)	.007	1	.223 (.561)	.158	1	-1.035 (.650)	2.534 1	_
Z			831						831			
-2 Log likelihood			984.82***						1116.67***			
Nagelkerke R ²			.116						.094			

Table 5 (continued)												
	Other Violent C	rimes					Other Non-violer	nt Crime	S			
	Support			Neutral			Support			Neutral		
	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	d.f.	Estimate (S.E.)	Wald	d.f.
<i>Group</i> International trend (1) Wrongful conviction (2) Deterrence (3)	.653 (.367) .529 .344 (.340) 1.025	3.156 1 1	1 149 (.368) .253 (.358)	.344 (.391) .165 .498	.776 1 1	1 166 (.281) .488 (.302)	.056 (.287) .350 2.608	.038 1 1	1 .173 (.310) .854 (.328)	.345 (.317) .310 6.782	1.189 1 1	_
Gender Male (0)	.017 (.276)	.004	1	.038 (.295)	.017	-	047 (.226)	.043	1	.096 (.244)	.154	1
$Age \leq 18 (1) \\ 19 (2) \\ 10 (2) \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $.885 (.391)*	5.115 .977 (.335)**	1 8.485	.637 (.415) 1	2.363 .811 (.355)* 5.204	1 1	.165 (.326) .243 (.276)	.257 .775	1 -	.387 (.351) .352 (.300)	1.220 1.377	1
Unade 1 st Grade (0)	669 (.353)	3.594	1	049 (.384)	.017	-	226 (.292)	.600	1	019 (.322)	.004	1
Major Law (0)	642 (.331)	3.753	1	175 (.345)	.256	-	425 (.293)	2.112	1	.201 (.296)	.461	1
Kestatency Local (0)	565 (.256)*	4.886	1	256 (.273)	.879	1	288 (.208)	1.903	1	337 (.225)	2.245	1
Family Economic Status ≥Middle-class (0) Well-off (1)	.132 (.440) .204 (.400)	.090 .260		205 (.466) 045 (.419)	.193 .012	1 1	.142 (.348) .290 (.319)	.166		041 (.381) .297 (.347)	.012 .730	
Victimization Yes (0)	332 (.454)	.536	-	063 (.481)	.017	Т	.432 (.408)	1.120	1	.110 (.454)	.059	1
<i>Fear of Crune</i> Agree (0) Neutral (1)	.435 (.299) 594 (.373)	2.128 .2.544		.453 (.325) .737 (.397)	1.946 3.439	1 1	.876 (.253)*** .532 (.290)	11.967 3.366	1 1	.444 (.273) .453 (.309)	2.651 2.153	1 1
Agree (0) Neutral (1)	$1.820 (.296)^{***}$ $1.253 (.343)^{***}$	37.759 13.384		$1.274 (.320)^{***}$ $1.395 (.360)^{***}$	15.828 15.052		1.309 (.236)*** 1.221 (.287)***	30.694 18.061	1 1	.850 (.256)*** .990 (.307)***	11.052 10.423	
Intercept N	.362 (.561)	.416	1 832	459 (.605)	.574	1	303 (.465)	.425	1 832	-964 (.513)	3.534	1
-2 Log likelihood Nagelkerke R ²			1200.45*** .142						13/0.01***			

287

(continued)
ŝ
e
Tab

 $\underline{\textcircled{O}}$ Springer

	Corruption					
	Support			Neutral		
	Estimate (S.E.)	Wald	df.	Estimate (S.E.)	Wald	d.f.
Froup						
International trend (1)	.286 (.304)	.884	1	137 (.311)	.195	1
Wrongful conviction (2)	.219 (.308)	.503 1	.065 (.309)	.045	1	
Deterrence (3)	.049 (.296)	.028	1	042 (.296)	.020	1
Gender						
Male (0)	.327 (.238)	1.896	1	.021 (.245)	.007	1
Age						
≤ 18 (1)	062 (.330)	.035	1	186 (.343)	.295	1
19 (2)	.114 (.291)	.153	1	.224 (.299)	.564	1
Grade						
1 st Grade (0)	345 (.317)	1.186	1	498 (.325)	2.342	1
Aajor						
Law (0)	-1.268 (.283)***	20.112	1	495 (.265)	3.479	1
Residency						
Local (0)	383 (.214)	3.209	1	169 (.218)	.596	1
⁷ amily Economic Status						
≥Middle-class (0)	585 (.381)	2.359 1	416 (.397)	1.096	1	
Well-off (1)	155 (.356)	.190	1	.012 (.371)	.001	1
hctimization						
Yes (0)	.487 (.437)	1.242	1	.453 (.456)	.985	1
Fear of Crime						
Agree (0)	.404 (.266)	2.310	1	.049 (.267)	.034	1
Neutral (1)	.404 (.317)	1.628	1	.361 (.317)	1.302	1
Retribution						
Agree (0)	$1.683(.244)^{***}$	47.713	1	.810 (.248)***	10.665	1
Neutral (1)	$1.450 (.309)^{***}$	22.005	1	1.487 (.301)***	24.337	1
ntercept	.265 (.510)	.269	1	.574 (.518)	1.231	1
7			832			
2 Log likelihood			1347.49***			
Vagelkerke R ²			.177			

	All Grou	tps $(n = 1.0)$	(77)	No Interv	vention (25	8)	Internatic	nal Trend	(272)	Wrongful	Conviction	ns (272)	Deterrenc	ce (275)	
	Retributi	on		Retributi	on		Retributio	uc		Retributic	ц		Retributio	ч	
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
Overall															
Support	79.2%	51.7%	50.9%	77.5%	53.2%	52.8%	80.1%	47.3%	47.3%	77.9%	53.6%	48.4%	80.7%	51.5%	54.8%
Neutral	16.6%	40.8%	24.7%	20.8%	37.1%	33.3%	15.6%	45.5%	24.3%	14.8%	38.1%	20.3%	15.6%	43.9%	20.5%
Oppose	4.2%	7.5%	24.4%	1.7%	9.7%	13.9%	4.3%	7.3%	28.4%	7.4%	8.3%	31.3%	3.7%	4.5%	24.7%
Chi-Square	147.94**	**		20.85***	*		51.60^{***}	v		39.75***			47.45***	v	
Murder (%)															
Support	83.8%	78.6%	74.2%	72.7%	83.9%	74.6%	87.9%	75.9%	77.0%	89.4%	78.6%	68.8%	84.4%	75.8%	75.7%
Neutral	13.1%	18.8%	15.2%	22.3%	16.1%	15.5%	10.6%	20.4%	13.5%	8.9%	17.9%	17.2%	11.1%	21.2%	16.2%
Oppose	3.1%	2.6%	10.2%	5.0%	0.0%	9.6%	1.4%	3.7%	9.5%	1.6%	3.6%	14.1%	4.4%	3.0%	8.1%
Chi-Square	29.06***	*		8.43			11.52*			19.19***			5.79		
Rape (%)															
Support	80.3%	77.4%	63.7%	76.9%	79.0%	55.6%	86.5%	77.8%	64.9%	77.9%	78.6%	60.9%	79.3%	73.8%	73.0%
Neutral	14.6%	17.4%	18.7%	12.4%	16.1%	27.8%	0.9%	20.4%	17.6%	19.7%	14.3%	18.8%	17.0%	20.0%	10.8%
Oppose	5.0%	5.3%	17.6%	10.7%	4.8%	16.7%	3.5%	1.9%	17.6%	2.5%	7.1%	20.3%	3.7%	6.2%	16.2%
Chi-Square	47.67***	*		13.96**			22.87***	v		19.38^{***}			12.31*		
Drug Traffick	cing (%)														
Support	76.6%	67.0%	58.1%	70.2%	70.5%	55.6%	77.5%	74.1%	56.8%	81.3%	61.9%	62.5%	77.0%	64.6%	58.1%
Neutral	17.3%	26.5%	20.8%	18.2%	21.3%	15.3%	18.3%	22.2%	27.0%	13.8%	31.0%	15.6%	18.5%	29.2%	24.3%
Oppose	6.1%	6.4%	21.1%	11.6%	8.2%	29.2%	4.2%	3.7%	16.2%	4.9%	7.1%	21.9%	4.4%	6.2%	17.6%
Chi-Square	61.97***	×		14.15**			15.45**			25.07***			15.39**		

 Table 6
 Effect of retribution on death penalty opinions by groups

Table 6 (con	tinued)														
	All Grou	ups $(n = 1.0)$	(77)	No Inter-	vention (25	(8)	Internatic	onal Trend	(272)	Wrongful	Conviction	ns (272)	Deterren	ce (275)	
	Retributi	ion		Retributi	uo		Retributio	uc		Retributic	u		Retributi	uo	
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
Other Violent	Crimes ('	%)													
Support	72.4%	55.8%	48.2%	64.5%	51.6%	40.3%	81.0%	61.1%	50.0%	74.0%	54.8%	48.4%	68.9%	56.9%	54.1%
Neutral	22.3%	36.2%	26.1%	25.6%	41.9%	31.9%	18.3%	33.3%	24.3%	20.3%	35.7%	20.3%	25.2%	33.8%	27.0%
Oppose	5.4%	<i>3%6.1</i>	25.7%	9.9%	6.5%	27.8%	.7%	5.6%	25.7%	5.7%	9.5%	31.3%	5.9%	9.2%	18.9%
Chi-Square	102.59*	**		22.07***	*		47.59***	v		33.31***			11.24*		
Non-violent (Crimes (%	(
Support	62.6%	54.2%	41.5%	61.2%	61.3%	37.5%	66.9%	53.7%	37.8%	60.2%	47.6%	37.5%	61.5%	56.3%	52.7%
Neutral	25.5%	34.1%	26.4%	25.6%	27.4%	25.0%	21.8%	38.9%	27.0%	26.0%	38.1%	23.4%	28.9%	31.3%	29.7%
Oppose	11.9%	11.7%	32.0%	13.2%	11.3%	37.5%	11.3%	7.4%	35.1%	13.8%	14.3%	39.1%	9.6%	12.5%	17.6%
Chi-Square	69.16**	*		21.87***	*		31.59***	v		23.35***			3.18		
Corruption (%	(o)														
Support	58.9%	40.4%	30.6%	53.7%	43.5%	22.2%	62.0%	51.9%	37.8%	62.6%	29.8%	28.1%	57.0%	41.5%	33.8%
Neutral	28.8%	48.7%	34.5%	31.4%	48.4%	41.7%	26.1%	42.6%	28.4%	30.1%	54.8%	32.8%	28.1%	46.2%	35.1%
Oppose	12.3%	10.9%	34.9%	14.9%	8.1%	36.1%	12.0%	5.6%	33.8%	7.3%	15.5%	39.1%	14.8%	12.3%	31.1%
Chi-Square	116.15*:	**		29.84***	*		27.88***			50.40***			18.83^{***}	v	

* p < .05; ** p < .01; *** p < .001 (two tailed);

and non-violent crimes-wrongful conviction group), students without a retribution belief reported even higher opposition rates than support rates!

To test H3 directly, we focused on the intervention effect on students' overall death penalty opinion (as this is the only significant outcome in Table 5 consistent with the hypothesis prediction). In Table 7, we reran cross-tab analyses of the overall death penalty opinion by groups, conditioned by retribution. That is, for each level of retribution (support, neutral, oppose), Table 7 displays cross-tab analyses of death penalty overall opinion by groups and corresponding chi-square results (with each intervention group compared to the control group). The results largely lent support to H3: with students holding a retribution belief, the changes occurred due to intervention tend to be minimum and non-significant statistically. For instance, compared to the control group, the opposition rates increased from 1.7 to 4.3%, 7.4%, and 3.7% for three intervention groups respectively (the 'Oppose' columns in the first row in Table 7). In contrast, with students holding no retribution belief, the changes tend to be bigger and significant. For instance, compared to the control group, the opposition rates now increased from 13.9 to 28.4%, 31.3% and 24.7% for three intervention groups respectively (the 'Oppose' columns in the third row). The results varied by intervention types: wrongful conviction produced the most robust results, international trend second, and deterrence the least.

Discussions

Our study is the first empirical test of the Marshall hypotheses in China. Specifically, we tested the effect of three different essays on students' death penalty opinions. Before we discuss contributions of this study and its policy implications, we'd like to acknowledge some major limitations.

First, consistent with Western studies (reviewed above), we had to utilize student samples at one university. There is no guaranty that our sample would be representative of students at other Chinese universities (e.g., the 2:1 female-male ratio at this particular university). Though we tried our best to randomize the samples (and our randomization seemed to have worked well with little initial group differences found (Table 1)), freshmen represented threequarters of our samples due to reasons unknown. Again, we had no direct control over the sampling at each college and data collection process. Instead, we had to rely on the local host.

Second, in designing our study, we had to compromise on several aspects. For instance, the content of the survey was adjusted several times after internal reviews, and Part V of the survey was added per request of host researchers, though irrelevant to this study. One direct impact was the extended length of the survey, which further affected our design of the essays and the structure of the survey. In particular, the overall length affected our decision not to use another 'irrelevant' essay for the control group, and not to use a pre-test for all groups (though we had primary concerns about the potential influence of the pre-test on students' post-test in one survey, see [42]). Unfortunately, these compromises had to be made in this particular study.

Third, we have also concerns about the effectiveness of our interventions. Given the impossibility of better stimuli (e.g., a class), we settled with medium length essays and it is difficult to judge if our interventions were strong enough (similar to concerns by [17]) in the Chinese setting.

Table 7 Eff	ect of retribu	tion on thε	e overall dea	ath penalty o	pinions by	groups									
	No Interv	ention (258	8)	Internation	al Trend (2	272)	Chi ²	Wrongful (Convictions	(272)	Chi ²	Deterrence	\$ (275)		Chi ²
	Overall C	pinion		Overall O _l	pinion			Overall O _F	inion			Overall O _l	pinion		
	Support	Neutral	Oppose	Support	Neutral	Oppose		Support	Neutral	Oppose		Support	Neutral	Oppose	
Retribution															
Agree	77.5%	20.8%	1.7%	80.1%	15.6%	4.3%	2.460	77.9%	14.8%	7.4%	5.599	80.7%	15.6%	3.7%	2.026
Neutral	53.2%	37.1%	9.7%	47.3%	45.5%	7.3%	868.	53.6%	38.1%	8.3%	6.867*	51.5%	43.9%	4.5%	1.584
Disagree	52.8%	33.3%	13.9%	47.3%	24.3%	28.4%	4.857†	48.4%	20.3%	31.3%	6.264*	54.8%	20.5%	24.7%	4.407
Compared to	the 'no inte	srvention' g	group, signif	ficant chi-squ	uare test res	sults were i	ndicated: †	<i>p</i> < .10; * <i>p</i>	<.05; ** <i>p</i>	<.01; *** <i>f</i>	o < .001 (tw	o tailed)			

gro
by
opinions
penalty
death
overall
on the
of retribution e
Effect
e 7

Despite these major limitations, our study presented a number of interesting findings, some consistent with previous studies and some new and unique. First, on testing Chinese students' knowledge on capital punishment (H1), the data showed uneven results: while Chinese students learned about wrongful convictions in China and correctly identified facts about China's domestic laws and policies, they were not well exposed to literatures on (lack of) deterrence and international practice of the death penalty. Our international trend essay seemingly helped students gain more facts, but essays based on wrongful convictions and deterrence failed to do so. Though research subjects' lack of knowledge was common in previous studies (reviewed above), what makes Chinese students' knowledge uneven is unique. Apparently, the salience of wellpublicized wrongful convictions proves that knowledge could be delivered properly and powerful. What matters then is what information is made publicly available in China. Another factor at work is Chinese students' strong belief in deterrence (consistent with [56, 59, 60]) and its influence in their learning (e.g., their willingness to 'ignore' messages presented in the deterrence essay). To challenge such a belief, more powerful evidence questioning deterrence probably needs to be presented.

Second, on testing the effect of intervention essays (H2), our results were mixed. On one hand, our interventions (particularly the wrongful conviction essay) helped lower students' support for the death penalty in the overall opinion (Tables 4 and 5), as predicted by the hypothesis. Though our intervention did not produce a majority opposition as suggested by Justice Marshall, it was consistent with past studies (reviewed above) and showed that the effect of 'informed knowledge' might be limited indeed. On the other hand, when opinions on specific capital offenses were surveyed, our interventions all seemed to have boosted students' support and a few of them (by international trend and deterrence groups) even produced significant results in both the bivariate and the multivariate analyses. This counter-effect in capital-offense specific testing is perplexing and it is not readily evident why so. One message is clear: the results on the overall death penalty opinion could be very different from that of specific capital offenses.

To further test if the content of delivered knowledge matters, we examined the effect of three different essays, tailored to the unique Chinese setting. The results showed that the content does matter: wrongful conviction essay was seemingly the most promising intervention to help reduce students' overall support for the death penalty (consistent with [24–26]), while international trend and deterrence essays produced the most significant counter-effect when students were asked about specific capital offenses. Besides the inherently more persuasive power of wrongful convictions, we suspect that what made Chinese students to 'ignore' evidence about international trend and lack of deterrence in the interventions might have something to do with lack of 'official endorsement': unlike well-publicized wrongful convictions, information on international trend and deterrence is lacking in China's public discourse, thus might not be convincing to the students. In addition, Chinese students may need more 'Chinaspecific' information in an essay to be persuasive. Hypothetically, if empirical studies conducted in China questioned the claimed deterrence effect of China's use of capital punishment, it would presumably carry more weight than studies conducted in the USA.

Third, on the effect of retribution (H3), our results (Tables 5, 6 and 7) confirmed Justice Marshall's concern and hypothesis: retribution is a consistent and strong

predictor for Chinese students' support of the death penalty (true across diverse capital offenses); students who hold a retributive belief were less likely to be swayed by the interventions, compared to their counterparts who hold no such a belief, which is consistent with the majority of previous studies [17, 36, 40, 42].

Fourth, the results of other demographic and control variables were also largely consistent with Western studies, except two variables, sex and major. Our data (Table 5) showed that male Chinese students were more likely to oppose the use of the death penalty than females (consistent with [54, 58]; but contrary to [60]), and law majors more likely to do so than non-law majors. Future studies should further explore these findings in the Chinese setting. For example, is law students' opposition due to more exposure to knowledge about the death penalty or due to other concerns about China's legal system?

Lastly, our study examined students' opinions on a number of non-murder capital offenses given their availability in the Chinese law, a new addition to the existing literature of empirical Marshall hypotheses testing. Consistent with previous survey studies conducted in China [57, 64, 65], students in our sample reported a high level of support across all capital offenses, though the support level decreased when the capital offense became less severe (Table 4). Nevertheless, the degrading severity of the capital offenses did not alter the nature of the results of the Marshall hypotheses testing. Rather, we witnessed the same pattern across six capital offenses in such testing. Again, the most perplexing finding is the counter-effect of the interventions when students were surveyed about these specific capital offenses. One possible answer might be the 'boomerang effect' in social psychology, which refers to the unintended consequences of an attempt to persuade but result in the adoption of an opposing position [66]. Nevertheless, the boomerang effect is questionable for two reasons: first, it is difficult to explain why students in our sample systemically adopted such an opposition if the boomerang effect was true. Second, it is difficult to explain why the boomerang effect did not occur to the overall death penalty opinion, but only to specific capital offense opinions. Close examination of the data did not lend support to the 'biased assimilation and polarization effect' either [35]. Future studies should further explore this conundrum and provide an explanation.

Our study carries a number of potential policy implications and suggestions for future studies. First, our study showed that the gist of the Marshall hypotheses is hopeful in China, despite the long history of China's use of capital punishment and the majority support for such use. Nevertheless, Justice Marshall's hope for the majority opposition might be exaggerated as the effect of 'informed knowledge' could be rather modest and subject to further conditions (as witnessed by this study and majority of previous studies).

Second, China's unique culture and political conditions have had an important role in such a testing. Culturally, the influence of traditional notions such as retribution and deterrence was apparent in our study and its significance on death penalty opinions continues in the era of the Internet and social media [67]. Politically, information control and use of propaganda influences not only what the public is informed but how it is informed [61]. The case of wrongful convictions seemingly proves the power of 'official endorsement'. Legal reformers in China may well choose what and how information is delivered to the public to influence their opinions within the existing political and legal context. Third, while we were puzzled by the counter-effect of knowledge when specific capital offenses were surveyed, one possible lesson is that the viability of numerous capital offenses (being legally available and actively utilized) in China could have self-justified capital punishment itself and provided stability to China's practice overall. If this is true, it would be critical for the Chinese government (and other nations that use capital punishment for a variety of offenses) to further reduce the number of capital offenses in law and in practice, if abolition is the eventual goal.

Last but not least, our study suffered similar methodological challenges as in the past. Besides logistics issues in carrying out research (e.g., sampling), we still struggle with the form and delivery of 'right' knowledge to maximize the effect of learning. There is plenty of room to improve on the depth and quality of interventions in China. In particular, as Justice Marshall suggested, the informed knowledge should target potential flaws of one's death penalty system. Wrongful convictions did exactly that in our study, but the effect of the other two subjects was doubtful. Again, the availability and transparency of information in China is critical to improve the quality of similar studies in the future. Granted, the validity and power of knowledge is always subject to theoretical and empirical challenges (e.g., deterrence or lack of thereof), which is true not only in a non-democratic society such as China but also in democratic societies with less restrictions to free information. Nevertheless, if more flaws of China's death penalty system and practice are exposed and made known to the public (e.g., insufficient legal defense rights, police and prosecutorial misconducts) when more information becomes available, Chinese citizens might be more willing to oppose the death penalty or favor an alternative as suggested by Justice Marshall.

Appendix: Intervention Essays

Essay I: International Trend of the Death Penalty

Abolition of the death penalty is a major trend of the intentional community. Since 1990, the pace of death penalty abolition has been accelerated significantly and on average three nations abolished the death penalty in each year. By 2015, 140 countries of the world (more than two thirds of all nations) have abolished the death penalty either in law or in legal practice. Among developed countries, only the United States and Japan retain the death penalty, while the Europe Union, Canada and Australian countries all abolished their practices.

China was considered the largest user of the death penalty by the international community. Thousands of people are sentenced to death and executed every year. Besides China, countries with the most executions are Iran, Pakistan, Saudi Arabia and the United States. According to statistics reported by the Amnesty International, at least 1634 people were executed in 25 countries in 2015 (note: this number does not include China).

There are 46 capital offenses in the current Criminal Law of China (amended in 2015). Besides homicide and violent crimes, crimes that do not cause people's death such as certain property crimes, economic crimes and corruption crimes can also be eligible for the death penalty. In comparison, federal laws of the United States contain 41 capital offenses, most of which are related to homicide and offenses that cause people's death (such as deaths resulted from kidnapping, drug trafficking and aircraft

hijacking). Only three offenses without human death are eligible for the death penalty in the United States, including treason, espionage and mailing of injurious articles with intent to kill. However in real legal practice, these three capital crimes are rarely applied and therefore exist in names only. In the new twenty-first century, death penalty executions in the United States experienced a gradual decline. In 2016, only 20 people were executed, which is the lowest number of execution since its peak in 1998 (when 98 people were executed).

In the process of death penalty abolition, international organizations played a prominent role. The Universal Declaration of Human Rights announced by the United Nations in 1948 proposed the concept of 'the right to life' for the first time. In 1966 the International Covenant on Civil and Political Rights (ICCPR) adopted by the United Nations General Assembly demanded that capital punishment, if retained, shall be imposed only for "the most serious crimes", and encouraged eventual abolition of the death penalty by all nations. In 1989, the Second Optional Protocol to the ICCPR aiming at the abolition of the death penalty commits its members to the abolition of the death penalty within their borders except "in time of war pursuant to a conviction for a most serious crime of a military nature committed during wartime". In 1997 the United Nations Commission on Human Rights adopted a resolution on the death penalty calling upon all countries that retain the death penalty to suspend executions, restrict the number of capital offenses, and timely make transparent information about one's death penalty executions. In 2010, a resolution to establish a moratorium on the use of the death penalty by United Nations Human Rights Commission received 107 votes in favor, 38 against and 36 abstentions. The resolution gained the most number of votes in favor since its first proposal in 2007, which reconfirmed the world trend to establish a moratorium on the use of the death penalty.

All of the above indicate that the abolition of the death penalty has become a primary focus of international public law. Overemphasis on one's self-determination and on one's special national conditions while ignoring the trend of death penalty abolition under the background of international human rights movements does not bode well with China's position as the world second largest economic entity. It could also create realistic problems in China's legal practice (such as international judicial cooperation and extradition agreements). For example, Lai Changxing, the primary culprit of the Xiamen Yuanhua smuggling case in the 1990's escaped to Canada after the exposure of his crimes. From 2000, the Chinese government had been negotiating with the Canadian government and asking for Lai's extradition. However the Canadian government refused to consider the negotiation unless China promised not to death-sentence and execute Lai. Only until 2011 was Lai extradited to China and subsequently sentenced to life imprisonment in 2012. In recent years, judicial reforms in China (such as reduction of the number of capital offenses, restriction on eligibilities of capital offenders, and increasing procedural justice and transparency) further indicate that China is moving closer to the requirements of international standards. The number of capital offenses has been reduced from 68 in 1997 to 55 in 2011, and again to 46 in 2015.

Essay II: Wrongful Convictions and the Death Penalty

Disposition and prevention of wrongful convictions could be viewed as a litmus test to the criminal justice system of a nation. As early as 1747, Voltaire wrote, "it is far better

to let a guilty man walk free than to have an innocent man wronged". Because of the irreversibility of the death penalty, it is critically important to prevent wrongful convictions which may result in executions. In reality, although safeguards have been adopted by various criminal justice systems, wrongful convictions still occur from time to time. Take the United States for an example: although the United States Supreme Court has established a stringent judicial review system for capital punishment, wrongful convictions are still unavoidable. According to statistics of the Death Penalty Information Center, from 1973, a total of 157 defendants have been exonerated. With the adoption of new technology (e.g., DNA testing), this trend of reversing wrongful convictions has been accelerated since the late 1990's. From 1973 to 1999, there were an average of 3.03 exonerations per year; from 2000 to 2013, this number was increased to 4.29 per year. Defendant who were exonerated spent an average of 11.3 years from the moment of one's death sentence to one's final exoneration.

Wrongful convictions often cause a series of problems with negative effects, but most of such problems are overlooked by the public. Firstly, wrongfully convicted defendants lose their personal freedom, and suffer from incarceration until one's exoneration, and some are even wrongfully executed. Secondly, due to wrongful convictions, the real criminals may not have yet been arrested. Not only did the real criminals escape from deserved punishment, they may also continue to commit more crimes. Besides, wrongful convictions waste tremendous human, material and other social resources. Wrongful convictions also weaken the public's satisfaction with and trust in the criminal justice system.

Reasons that lead to wrongful convictions are various, but are often closely related to the criminal justice system of a nation. Studies of American wrongful convictions revealed a number of key reasons, including eyewitnesses' false testimonies (misidentification), (coerced) confession by wrongfully convicted defendants, subjective and obstinate opinions by the police/prosecutor, wrong information provided by informants, wrong forensic examination results, prosecutorial misconduct, and lack of effective criminal defense. Compared with the situation of China, besides all of the above factors, scholars pointed out many others such as use of torture, over-reliance upon one's confession, illegally extracted evidence, falsification of evidence and concealment (by the police), overlook of exculpatory evidence, rejection of reasonable opinions of defense attorneys, and the traditional 'presumption of guilt' in practice.

In recent years, frequent exposure of wrongful conviction cases shows increasing attention given by China's criminal justice system to wrongful convictions. It also reveals serious drawbacks of China's system. A white paper titled *The Judicial Disclosure of Chinese Courts (2013–2016)* published by the Supreme People's Court revealed that in 2016 alone, courts in the whole country corrected 11 new major wrongful conviction cases (involving 17 people). From 2013 to 2016, courts at all levels announced 3718 defendants 'not guilty', accepted a total of 16,889 state compensation cases, and compensated a total of 699 million RMB. Many infamous unjust verdicts and wrongful convicted of rape and homicide, sentenced to death and executed (by shooting). Because the case occurred during a "strike-hard" campaign, it took merely 2 months from the commission of the crime to his execution. Only until 2005 when the real criminal was arrested, was Huugjilt recognized as wrongfully convicted. Huugjilt was officially exonerated (posthumously) in 2014 and his family was

compensated for more than 2 million RMB. In 2006, in another case, Nian Bin was identified by the police as the primary suspect of a poisoning case in Pingtan, Fujian province. From 2008 to 2014, Nian Bin's case was tried multiple times by the Intermediate People's Court of Fujian (the court of the first instance), the High Court of Fujian (the court of the second instance) and the national Supreme People's Court. He was sentenced to death three times by the first instance court and his death sentence was affirmed and approved once by the High Court of Fujian. In other words, he was very close to facing death four times. Finally due to insufficient evidence, Nian was announced 'not guilty' in 2014 and he received more than one million RMB as a result of compensation afterwards.

Essay III: Deterrence and the Death Penalty

The deterrence effect is one of the most important reasons why people support the death penalty. The deterrence effect of punishment is derived from utilitarianism. Utilitarianism rarely considers motivations and means of one's behavior but the maximization of benefits incurred by one's behavior. What is good is to increase the maximum benefit; otherwise it is bad. The deterrence function of punishment uses coercive force to increase the suffering of criminals and therefore makes people fear for the punishment and dare not commit a crime. Scholars who support the deterrence of punishment claim that if people know beforehand that the pain from the punishment of a crime outweighs the gain from a crime, their will to commit a crime could be restrained and their crimes deterred and prevented. Generally speaking traditional deterrence theories believe that the effectiveness of deterrence is determined by three factors: swiftness, certainty and severity of the punishment. That is, once crimes occurred, the faster the punishment is rendered, the more certain the punishment is, and the more severe the punishment is, the more effective the deterrence effect is. The deterrence of punishment can be categorized as two kinds: specific deterrence and general deterrence. The former is to deter possible future crimes of a criminal through punishment of that particular criminal, and the latter is to deter crimes from all potential criminals through punishment of one particular criminal. In general the death penalty is considered the most serious in all kinds of punishment. Because the criminal can never commit a crime again after execution, the deterrence of the death penalty emphasizes the effect of general deterrence.

Many scholars point out that it is subject to debate whether the death penalty has its expected deterrence effect. For example, the reason why most people obey the law is not because of the fear of punishment after one commits a crime, but due to their belief in moral and ethical values. In contrast, a small number of vicious people know very well that their crimes will trigger strict punishment; nevertheless they still defy the law, and punishment (include the death penalty) is difficult to carry a deterrence effect on them. Moreover, the deterrence function of punishment assumes that criminals are capable of rational decision-making and are able to foresee the consequences of their crimes and to weigh potential benefits of their crimes with the consequences. In reality, however, not all criminals have such a capability of making rational decisions.

Does the death penalty have a deterrence effect? Empirical researches by Western social scientists showed that the deterrence effect of the death penalty is far less powerful than we think. For example, in the United States, most of condemned capital

criminals are murderer, and quite a few of them committed crimes by passion. In such cases, criminals lose their capability of rational decision-making in the moment of crime. To date, there lacks reliable data to prove that the death penalty can prevent or stop murder effectively. In addition, the presumed deterrence effect of the death penalty on other violent and nonviolent crimes are also doubtful. For example, research shows that in the United States, some states that retain the practice of the death penalty have a higher rate of violent crimes than that of the state without the death penalty. Furthermore, scholars argued it is not true that "the more severe the punishment is, the better the deterrence effect is", as its marginal deterrence effect decreases (when the severity of the punishment increases). In some circumstances, severe punishment (such as the death penalty) could increase the likelihood of unnecessary crimes by criminals (e.g., a criminal kills a rape victim to cover up the crime and destroys evidence and the dead body). In such circumstances, the use of the death penalty may further stimulate, instead of deter, one's crimes. Besides, scholars who propose to abolish and replace the death penalty also point out that there are no reliable data to prove that the death penalty has a marginal deterrence effect to any other effective alternative penalties (such as life imprisonment without possibility of parole). That is, there is no proof that the death penalty carries more deterrence effect than that of other alternative penalties.

In China, the range of death penalty application is broader and covers not only violent crimes but also nonviolent crimes (such as drug trafficking, corruption and some economic crimes). In view of no existence of reliable data on crime and the death penalty, empirical studies of the deterrence effect of the death penalty in China are nonexistent. In recent years, some scholars point out that although China always applies severe punishment for drug crimes (e.g., the rate of death sentenced drug offenders stays at a high level), drug crimes keep increasing, thus questioning the deterrence effect of China's death penalty to drug crimes. For the same reason, the presumed deterrence effect of the death penalty to other crimes (such as corruption cases) should be openly discussed and questioned.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

- Harris, P. (1986). Over-simplification and error in public opinion surveys on capital punishment. Justice Quarterly, 3(4), 429–455.
- Bohm, R. (1987). American death penalty attitudes: A critical examination of recent evidence. *Criminal Justice and Behavior*, 14(3), 380–396.
- Bohm, R. (1992). Retribution and capital punishment: Toward a better understanding of death penalty opinion. *Journal of Criminal Justice*, 20(3), 227–236.
- Warr, M., & Stafford, M. (1984). Public goals of punishment and support for the death penalty. *Journal of Research in Crime and Delinquency*, 21(2), 95–111.
- Britt, C. (1998). Race, religion, and support for the death penalty: A research note. Justice Quarterly, 15(1), 175–191.
- Tyler, T., & Weber, R. (1982). Support for the death penalty: Instrumental response to crime, or symbolic attitude? *Law and Society Review*, 17(1), 21–46.
- Brace, P., & Boyea, B. (2008). State public opinion, the death penalty, and the practice of electing judges. *American Journal of Political Science*, 52(2), 360–372.

- Ellsworth, P. C., & Ross, L. (1983). Public opinion and capital punishment: A close examination of the views of abolitionists and retentionists. *Crime & Delinquency*, 29(1), 116–169.
- 9. Jones, P. (1994). It's not what you ask, it is the way that you ask it: Question form and public opinion on the death penalty. *The Prison Journal*, *73*(1), 32–50.
- Lu, J. (2009). On the application of the death penalty and public opinion. *Chinese Sociology and* Anthropology, 41(4), 66–79.
- 11. Sato, M. (2014). The death penalty in Japan: Will the public tolerate abolition? Wiesbaden: Springer VS.
- Vidmar, N., & Dittenhoffer, T. (1981). Informed public opinion and death penalty attitudes. *Canadian Journal of Criminology*, 23, 43–56.
- Johnson, D. T., & Miao, M. (2016). Chinese capital punishment in comparative perspective. In B. Liang & H. Lu (Eds.), *The death penalty in China: Policy, practice and reform* (pp. 300–326). New York: Columbia University Press.
- Zhang, N. (2016). Crimes of counterrevolution and politicized use of the death penalty during the Mao era. In B. Liang & H. Lu (Eds.), *The death penalty in China: Policy, practice and reform* (pp. 62–96). New York: Columbia University Press.
- 15. Liang, B., & Lu, H. (eds.). *The death penalty in China: Policy, practice and reform*. New York: Columbia University Press.
- Liang, B. (2014). Internet development and its influences on legal reform in China. *China: An International Journal*, 12(3), 27–54.
- Sarat, A., & Vidmar, N. (1976). Public opinion, the death penalty, and the eighth amendment: Testing the Marshall hypothesis. *Wisconsin Law Review*, 17, 171–206.
- 18. LaChappelle, L. (2014). Capital punishment in the era of globalization: A partial test of the Marshall hypothesis among college students. *American Journal of Criminal Justice*, *39*, 839–854.
- Bohm, R., & Vogel, R. E. (1994). A comparison of factors associated with uninformed and informed death penalty opinions. *Journal of Criminal Justice*, 22(2), 125–143.
- Bohm, R., Clark, L. J., & Aveni, A. F. (1990). The influence of knowledge on reasons for death penalty opinions: An experimental test. *Justice Quarterly*, 7(1), 175–188.
- 21. Murray, G. (2003). Raising considerations: Public opinion and the fair application of the death penalty. *Social Science Quarterly*, 84(4), 753–770.
- Bohm, R. (1989). The effects of classroom instruction and discussion on death penalty opinions: A teaching note. *Journal of Criminal Justice*, 17(2), 123–131.
- Bohm, R., & Vogel, R. E. (1991). Education experiences and death penalty opinions: Stimuli that produce changes. *Journal of Criminal Justice Education*, 2(1), 69–80.
- Clarke, A. W., Lambert, E., & Whitt, L. A. (2001). Executing the innocent: The next step in the Marshall hypotheses. *New York University Review of Law and Social Change*, 26(3), 309–345.
- Lambert, E., & Clarke, A. (2001). The impact of information on an individual's support of the death penalty: A partial test of the Marshall hypothesis among college students. *Criminal Justice Policy Review*, 12(3), 215–234.
- Lambert, E. G., Camp, S. D., Clarke, A., & Jiang, S. (2011). The impact of information on death penalty support, revisited. *Crime & Delinquency*, 57(4), 572–599.
- Mitchell, A. D. (2006). The effect of the Marshall hypothesis on attitudes toward the death penalty. *Race, Gender & Class, 13*, 221–247.
- Sandys, M. (1995). Attitudinal change among students in a capital punishment class: It may be possible. *American Journal of Criminal Justice*, 20(1), 37–55.
- Bohm, R. (1990). Death penalty opinions: Effects of a classroom experience and public commitment. Sociological Inquiry, 60(3), 285–297.
- Cox, A. K. (2013). Student death penalty attitudes: Does new information matter? *Journal of Criminal Justice Education*, 24(4), 443–460.
- Falco, D. L., & Freiburger, T. L. (2011). Public opinion and the death penalty: A qualitative approach. *The Qualitative Report*, 16(3), 830–847.
- 32. Kennedy-Kollar, D., & Mandery, E. J. (2010). Testing the Marshall hypothesis and its antithesis: The effect of biased information on death penalty opinion. *Criminal Justice Studies*, 23(1), 65–83.
- Vollum, S., & Buffington-Vollum, J. (2010). An examination of social-psychological factors and support for the death penalty: Attribution, moral disengagement, and the value-expressive function of attitudes. *American Journal of Criminal Justice*, 35, 15–36.
- Vollum, S., Mallicoat, S., & Buffington-Vollum, J. (2009). Death penalty attitudes in an increasingly critical climate: Value-expressive support and attitude mutability. *The Southwest Journal of Criminal Justice*, 5(3), 221–242.

- Lord, C. G., Ross, L., & Lepper, M. R. (1979). Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology*, 37(11), 2098–2109.
- Bohm, R., Clark, L. J., & Aveni, A. F. (1991). Knowledge and death penalty opinion: A test of the Marshall hypotheses. *Journal of Research in Crime and Delinquency*, 28(3), 360–387.
- Cochran, J. K., & Chamlin, M. B. (2005). Can information change public opinion? Another test of the Marshall hypotheses. *Journal of Criminal Justice*, 33(6), 573–584.
- Cochran, J. K., Sanders, B., & Chamlin, M. B. (2006). Profiles in change: An alternative look at the Marshall hypotheses. *Journal of Criminal Justice Education*, 17(2), 205–226.
- Mallicoat, S. L., & Brown, G. C. (2008). The impact of race and ethnicity on student opinions of capital punishment. *Journal of Ethnicity in Criminal Justice*, 6(4), 255–280.
- Michel, C., & Cochran, J. K. (2011). The effects of information on change in death penalty support: Race- and gender-specific extensions of the Marshall hypotheses. *Journal of Ethnicity in Criminal Justice*, 9(4), 291–313.
- Wright, H., Bohm, R., & Jamieson, K. M. (1995). A comparison of uninformed and informed death penalty opinions: A replication and expansion. *American Journal of Criminal Justice*, 20(1), 57–87.
- Lee, G. M., Bohm, R., & Pazzani, L. M. (2014). Knowledge and death penalty opinion: The Marshall hypotheses revisited. *American Journal of Criminal Justice*, 39, 642–659.
- Bohm, R., & Vogel, B. L. (2004). More than ten years after: The long-term stability of informed death penalty opinions. *Journal of Criminal Justice*, 32(4), 307–327.
- Bohm, R., Vogel, R. E., & Maistro, A. A. (1993). Knowledge and death penalty opinions: A panel study. *Journal of Criminal Justice*, 21(1), 29–45.
- Wang, Y. (2015). Beyond revenge: Public opinion, court and judicial control of the death penalty. *Jilin University Journal (Social Sciences Edition)*, 55(4), 66–77.
- Xiao, X. (2009). The interaction between public opinion and death penalty application in the context of China. Journal of Shandong University of Science and Technology (Social Science Edition), 11(1), 41–46.
- 47. Zhang, N. (2010). Public opinion and the death penalty debate in China. China Perspectives, 1, 85-96.
- Fu, H. (2016). Between deference and defiance: Courts and penal populism in Chinese capital cases. In B. Liang & H. Lu (Eds.), *The death penalty in China: Policy, practice and reform* (pp. 274–299). New York: Columbia University Press.
- 49. Belkin, I. (2017). Justice in the PRC: How the Chinese community party has struggled with managing public opinion and the administration of criminal justice in the internet age. In F. Flora Sapio, S. Trevaskes, S. Biddulph, & E. Nesossi (Eds.), *Justice: The China experience* (pp. 195–228). Cambridge: Cambridge University Press.
- Miao, M. (2013). Capital punishment in China: A populist instrument of social governance. *Theoretical Criminology*, 17(2), 233–250.
- Tang, Y., & Wang, M. (2007). On public opinion and judicial control of capital punishment. In Li Jie et al. (Eds.), *Criminal Law Problems in Harmonious Society* (863–870). Beijing: Publishing House of People's Public Security University of China.
- Zuo, J. (2009). The influence of public opinion on the application of the death penalty. *Chinese Sociology* and Anthropology, 41(4), 80–88.
- Jiang, S. (2016). Public opinion and the death penalty. In B. Liang & H. Lu (Eds.), *The death penalty in China: Policy, practice and reform* (pp. 247–273). New York: Columbia University Press.
- Zhao, J. (2015). Public opinion on the abolition of the death penalty: Measurement of the idea about inculpation of the crime of organizing prostitution. *Chinese Journal of Law*, 2, 26–41.
- Cao, L., & Cullen, F. (2001). Thinking about crime and control: A comparative study of Chinese and American ideology. *International Criminal Justice Review*, 11(1), 58–81.
- Jiang, S., Lambert, E., Wang, J., Saito, T., & Pilot, R. (2010). Death penalty views in China, Japan and the U.S.: An empirical comparison. *Journal of Criminal Justice*, 38(5), 862–869.
- Qi, S., & Oberwittler, D. (2009). On the road to the rule of law: Crime, crime control, and public opinion in China. *European Journal of Criminal Police and Research*, 15(1–2), 137–157.
- Wu, Y., Sun, I., & Wu, Z. (2011). Support for the death penalty: Chinese and American college students compared. *Punishment and Society*, 13, 354–376.
- Jiang, S., Lambert, E., & Wang, J. (2007). Capital punishment views in China and the United States: A preliminary study among college students. *International Journal of Offender Therapy and Comparative Criminology*, 51(1), 84–97.
- Liang, B., Lu, H., Miethe, T. D., & Zhang, L. (2006). Sources of variation in pro-death penalty attitudes in China: An exploratory study of Chinese students at home and abroad. *British Journal of Criminology*, 46(1), 119–130.

- 61. Oberwittler, D., & Qi, S. (2009). Public opinion on the death penalty in China: Results from a general population survey conducted in three provinces in 2007/08 (Forschung Aktuell/research in brief 41). Freiburg: Max Planck Institute for Foreign and International Criminal Law.
- 62. Zhang, H., & He, X. (2011). Survey report on the death penalty. Presentday Law Science, 9(4), 59-68.
- 63. He, J. (2016). Back from the dead: Wrongful convictions and criminal justice in China. Honolulu: University of Hawai'i Press.
- 64. Jia, Y. (2005). Death penalty views among college students in China: An empirical study. *Legal Science Review (Faxue Pinglun)*, *3*, 20–33.
- Kuang, L., Zeng, Y., Li, K., Liu, S., Chen, M., Dai, C., & Zhang, X. (2010). A survey on criminal justice professionals' attitudes toward the death penalty. In H. Mo (Ed.), A Survey Report on the Death Penalty in China (pp. 63–224). Taibei: Yuanzhao Press.
- Hovland, C. I., Harvey, O. J., & Kelley, H. H. (1953). Communication and persuasion. New Haven: Yale University Press.
- Liu, J., & Liang, B. (2018) A case study of Chinese netizens' opinions on capital punishment: Diversity, rationale, and interaction. *Modern China*. https://doi.org/10.1177/0097700418819833.