

# Curriculum and Ideology

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## Abstract

We study the causal effect of school curricula on students' political attitudes. We exploit a major textbook reform in China that was rolled out between 2004 and 2010 with the explicit intention of shaping youths' ideology. To measure its effect, we present evidence from a novel survey we conducted among 2000 students at Peking University. The sharp, staggered introduction of the new curriculum across provinces allows us to identify the causal effects of the new educational content in a generalized difference in differences framework. We examine government documents articulating desired consequences of the reform, and identify changes in textbook content and college entrance exams that reflect the government's aims. These changes were often effective: study under the new curriculum is robustly associated with increased trust in government officials, changed views on political participation and democracy in China, and a more skeptical view of free markets.

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# 1 Introduction

Beliefs, attitudes, and ideology play a fundamental role in human societies: they shape interactions within social networks and in markets; they shape political institutions and policy choices. People’s attitudes are formed by a variety of sources: they are transmitted from parents to children (vertical transmission); from peer to peer (horizontal transmission); from third parties, such as media, experts, or the state (oblique transmission); and, they arise from individual experiences.<sup>1</sup> The influence of education on attitudes has also been widely studied across the social sciences, but without an established body of clear, causal evidence of its effects.

In this paper, we use novel survey evidence to study the causal effect of school curricula on students’ political attitudes and beliefs, examining the impact of a new high school political science curriculum that was introduced by the Chinese Communist Party between 2004 and 2010 with the explicit intention of shaping students’ ideology. The State Council (the highest administrative body in the Chinese government) and the Ministry of Education issued documents articulating the government’s objectives for the new political science curriculum: among these were emphasizing the adherence of the Chinese government to the rule of law; teaching students about Chinese socialist democratic institutions; teaching students about China’s unique economic institutions and development path; cultivating in students a traditional national identity that bridged ethnic groups; and, promoting increased concern for the environment. We document the Chinese government’s aims in undertaking the curriculum reforms and, based on a thorough reading of political science textbooks, identify a set of specific changes to the high school politics curriculum that reflect the aims of the Chinese government.<sup>2</sup> We describe changes in textbook content across curricula, and changes in the high-stakes college entrance exams (*gaokao*) associated with the old and new curricula.

The curriculum reform we study offers a particularly promising setting in which to estimate the causal effect of educational content on students’ beliefs and attitudes. Between 2004 and 2010, the new curriculum (the “8th Curriculum Reform”) was sharply introduced to entering cohorts of high school students (but not to older students) in a staggered manner, with different provinces adopting the new curriculum in different years. We test for an impact of studying under the new curriculum by analyzing the responses to a novel survey we conducted with nearly 2,000 Peking University undergraduate students. The survey was designed to elicit students’ *attitudes*

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<sup>1</sup>Vertical transmission has received considerable attention, for example Bisin and Verdier (2001). Peers’ influence on beliefs has been studied by Sacerdote (2001) and Sacerdote (2011), among others. DellaVigna and Kaplan (2007), DellaVigna et al. (forthcoming), and Shapiro (2014) study the influence of the media on political views; Alesina and Fuchs-Schündeln (2007) study the effects of growing up in a Communist system on policy preferences later in life. Di Tella et al. (2007), Giuliano and Spilimbergo (2013), Malmendier and Nagel (2011), and Rao (2013) study the role of individuals’ experiences in shaping attitudes and beliefs.

<sup>2</sup>These changes included both positive and normative content; we believe that both types of changed content may play an important role in shaping political attitudes, and we provide examples of both types of new content in Section 4 and in Appendix D. Unfortunately, we are not able to distinguish between the effects of positive and normative content on students’ attitudes.

rather than test their ability to memorize their high school curricula: we specifically asked students questions in a manner that did not look like a series of examination questions, and as we discuss below, the pattern of responses does not look like what one would expect if students' responses simply reflected what they believed to be "correct" answers. Our survey allows us to measure the political attitudes and beliefs of four cohorts of Chinese students, who entered high school between 2006 and 2010, drawn from 29 Chinese provinces.

We apply a generalized difference in differences framework to test whether students who studied under the new curriculum do, in fact, express different political attitudes from those who studied under the old curriculum. We find that the new curriculum was often successful in changing students' views on important issues: controlling for province and cohort fixed effects (and, in various specifications, a range of other controls), students who were exposed to the new curriculum were more likely to trust a broad range of government officials; were more likely to view China's political system as democratic; and, were more likely to view an unconstrained market economy with skepticism. We find quantitatively large persuasion rates: around 20% of students who would not have held the government's desired views in the absence of exposure to the new curriculum are estimated to change their views. We do not find statistically significant effects of the new curriculum on (majority) Han Chinese students' attitudes toward minorities or minorities' views on their relationship to majority Chinese culture (though in general, the direction of the estimated effects is in line with the government's aims); nor did the new curriculum cause students to favor policies protecting the environment, perhaps because these can be seen as opposed to economic growth—another high priority of the government.

These findings contribute to a vast social science literature on the ability of educational content to shape individuals' beliefs, preferences and political ideology. Prior work ranges across centuries and continents—from studies of the construction of a "national sentiment" through public schooling in 19th century Prussia and France (Weber, 1976) to studies of American schools in the 19th and 20th centuries (Dewey, 1916; Lipset, 1959; Freire, 1970; Bowles and Gintis, 1976), and Communist and Socialist education in the second half of the 20th century (Lott, Jr., 1999).<sup>3</sup> The idea that schooling can be used to mold (more pejoratively, "brainwash") children's views of their social, economic, and political environment is a powerful one, which resonates across time and space.

Despite this resonance, and despite striking examples of schooling changes being associated with ideological changes (e.g., education in Nazi Germany), it is extremely difficult to determine whether schooling plays a causal role in shaping beliefs or if, instead, changes in curriculum simply coincide with other social, political, or economic changes which themselves shape preferences, perhaps differentially by age. For example, one might wish to study the effects of Nazi education on the attitudes of individuals who were school-aged during the Third Reich. However, observ-

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<sup>3</sup>See also Kremer and Sarychev (1998), Gradstein and Justman (2002), Gradstein and Justman (2005), Spilimbergo (2009), Friedman et al. (2011), Campante and Chor (2012), and Alesina and Reich (2013).

ing different attitudes among individuals who studied in Nazi-era schools, one might question whether the schools themselves affected beliefs, or whether young people in the time of the Third Reich were differentially affected by the environment around them, their parents, the media, and what they observed in their daily lives.

Recently, scholars have begun making progress toward identifying the causal effect of education on political attitudes and ideology. Friedman et al. (2011) exploit experimental variation in access to additional schooling on Kenyan women’s political and social views. Their work identifies an effect of schooling on attitudes, but does not identify the effects of particular educational *content* on attitudes. Fisman et al. (2009) do study variation in educational content, examining the effects of exposure to economics-oriented faculty at Yale Law School on students’ behavior in an incentivized game. Their work exploits random assignment to Law School instructors; one drawback, though, is the small size of the sample, especially when considering the possibility of correlated errors within classes. In a fascinating study of the impact of Catalan education on political attitudes, Clots-Figueras and Masella (2013) exploit variation that is similar to ours—cohort-varying exposure to new educational content—but they lack the sharp variation in educational content across cohorts that we can exploit, and they also lack credible cross-sectional variation with which to address concerns about unobservable cross-cohort differences (their work also studies the combined effect of changes in the language of instruction with changes in content, in a context of broad political change).

By examining sharp province $\times$ cohort variation in school curricula, we can plausibly identify the causal effect of educational content on attitudes and ideology (we discuss threats to our identification strategy in detail in Section 4.1). Specifically, our identification strategy allows us to rule out as confounding factors: (i) province-specific differences (e.g., levels of development); (ii) cohort-specific differences (e.g., broad changes in attitudes across time); (iii) province $\times$ time varying shocks that affect adjacent cohorts similarly (e.g., natural disasters or province-level political shocks that do not differentially affect children of different ages); and (iv) province $\times$ time varying shocks that affect adjacent cohorts differentially, but smoothly (e.g., province-specific trends in economic activity), in our specification that includes province $\times$ cohort-specific trends.

Throughout our analysis, we implement a variety of methods to address concerns regarding the testing of multiple hypotheses (following Anderson, 2008), and most of our inferences are unaffected. In addition to our main specifications, in Section 5.1 we present a variety of robustness exercises that support our main findings. We present estimated effects of the new curriculum based on a follow-up survey that was conducted among non-respondents in our online survey, and our estimates are qualitatively similar among respondents in the follow-up. We also present estimates from specifications including individual-level controls, province $\times$ cohort-level controls, and province-specific, cross-cohort trends, and these are quite similar to our baseline findings. We present estimates disaggregated by students’ “distance” (in years) to (or from) the introduction of the new curriculum to test for pre-treatment trends in attitudes, and we find no evidence of a

significant pre-treatment trend, while we do find a sharp, significant change in attitudes among the first post-treatment students. We estimate the effect of the curriculum change using a balanced “short panel” that includes only cohorts just before and just after the curriculum changed in a particular province, and again our baseline findings are confirmed. We also show alternative inference results, derived from 10,000 “placebo” introductions of the new curriculum, which confirm our inferences using standard methods. Finally, we test for evidence of changes in teaching methods, and do not find significant changes (teaching to the high-stakes college entrance exam, the *gaokao*, remains paramount).

Beyond identifying the causal effect of typically endogenous curriculum change, our particular setting is of great interest. The variation in educational content we observe is naturally occurring, introduced on a massive scale by an authoritarian state that explicitly aimed to shape children’s views. Whether the Chinese government can shape the political attitudes of Chinese children is difficult to know *ex ante*: on the one hand, the Chinese government seems to be very effective in many domains; in addition, Chinese children spend a great deal of their time in school, absorbing information on which they will be tested. On the other hand, students know that the Communist Party disseminates information (school curricula and media) in part driven by political concerns. One might believe that students will thus view the official curriculum with skepticism. The new curriculum might also fail to persuade students because the internet allows students to easily access content that differs from official Party positions. Thus, an important question in the internet age is whether school curricula can affect ideology even when students know that their curriculum may be shaped by political concerns, and when students have access to information that differs from the party line.

Our finding that China’s Communist Party successfully shaped students’ views contributes to a growing empirical literature on “persuasion” (DellaVigna and Gentzkow, 2010), much of which has focused on the persuasive effects of media communications (DellaVigna and Kaplan, 2007; Bursztyn and Cantoni, 2012; Yanagizawa-Drott, 2012; DellaVigna et al., forthcoming). Recent work has focused on attempts by authoritarian regimes to shape the views of their citizens (Alesina and Reich, 2013), to which we contribute a study of the role of educational content in shaping political attitudes. Our findings suggest that alongside other mechanisms of social and political control, political elites, indeed, can shape students’ attitudes by choosing the content of the education system.

The paper proceeds as follows: in Section 2, we provide an overview of China’s education system, and discuss China’s 8th Curriculum Reform, which is the focus of our study. In Section 3, we describe our novel survey of Peking University students, which is our primary data source; we also discuss here what can be learned from direct survey questions in this context. In Section 4, we present our empirical model, discuss the identifying assumptions, and present our main results, including a discussion of statistical inference in a setting in which multiple hypotheses are tested. In Section 5, we provide a discussion of our findings: we first present a variety of robustness and

placebo tests that support a causal interpretation of our findings; next, we try to benchmark the magnitudes of our results, comparing the “persuasion rates” we find with those found by other scholars, and also presenting evidence from the AsiaBarometer survey of a significant association between reported political attitudes and behavior; we then discuss the external validity of our results. Finally, in Section 6, we place our findings within the social science literature on the effects of schooling on beliefs, and conclude.

## 2 China’s curriculum reform

The empirical setting we propose to study is China’s 8th Curriculum Reform, a nationwide education reform undertaken by the Chinese central government beginning in 2001.<sup>4</sup> Our focus will be the reformed textbooks of senior high school (*gaozhong xinkebiao*) students, corresponding to grades 10–12 in the Chinese educational system (see Figure A.1). For reference, in Appendix A, we briefly describe the structure of the Chinese high school curriculum.

### 2.1 Government aims, changes in curriculum, and changes in the *gaokao*

An explicit goal of the 8th Curriculum Reform was to shape (or reshape) students’ political and social beliefs. In a 2001 document preparing the reform (“Framework for Basic Education Curriculum Reform”), the Ministry of Education of the People’s Republic of China stated that education should “form in students a correct worldview, a correct view on life, and a correct value system.”<sup>5</sup> An author of the new Politics textbooks described the development of the new curriculum as follows:<sup>6</sup>

We believe that high school students are at an age of rapid development and transformation of their own political ideology. . . . The Politics textbook is the spiritual material that the country provides for the students. Writing the Politics textbook is an act at the state level, rather than an academic activity of the individual author. Although the high school Politics textbook teaches very basic knowledge, it possesses extremely strong political, policy-oriented, and scientific characteristics. With a large readership, it will influence an entire generation of young people.

While the 8th Curriculum Reform affected the content of textbooks across the high school curriculum (for example, there was an increase in the discussion of Confucianism in the reformed humanities curriculum), we focus on changes made to the Politics curriculum because it is designed

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<sup>4</sup>The previous, 7th curriculum reform was initiated in 1992.

<sup>5</sup>Translated excerpts from this and other official documents preparing the Curriculum Reform are presented in Appendix B. Along with changes in the content of the curriculum, there was a desire to change the exam-oriented nature of primary and secondary education through the introduction of new instructional methods. However, this aspect of the reform is acknowledged to have failed, amounting to “wearing new shoes to walk on the old path” (see, for example, Guo, 2010). We examine changes in instructional methods across curricula in further detail in Section 5.

<sup>6</sup>See Appendix C for translated excerpts from an essay written by Tian Xinming, chair of the committee in charge of rewriting the Politics textbook. The original text can be found at [http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830\\_824446.htm](http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm), last accessed February 9, 2014.

for “moral and ideological education.”<sup>7</sup> Indeed, the State Council, China’s chief administrative authority, issued a memo in 2004 titled “Suggestions on Strengthening the Ideological and Moral Construction of Our Youths,” which articulated the government’s aims for the reform, and guided the writing of the new Politics textbooks. The memo declared the socialization of young people to be an “important and urgent strategic task,” and saw schools as “the primary channel for transmitting ideological and moral education to young people.”<sup>8</sup> We consulted the State Council memo, several other government documents, as well as the Ministry of Education’s “Curriculum Framework for the Senior High School Politics Subject” to identify important government objectives for the curriculum reform (these documents are described in Appendix B).

To identify specific changes in curriculum content pre- versus post-reform, we performed a comprehensive comparison of the old and new editions of the *Economic Life* and *Political Life* textbooks that made up half of the tenth grade Politics curriculum.<sup>9</sup> The Politics curriculum textbooks are common to all provinces of China, so our analysis was limited to a single set of textbooks for the provinces/cohorts under the new curriculum, and one set for the provinces/cohorts under the old curriculum.<sup>10</sup> While much of the textbooks’ content is maintained across editions, some content changed considerably. We identified sections that were entirely new to the reformed textbooks; we also identified sections that were removed from the old curriculum and sections that were extensively revised.

It is important to relate the changes in textbook content to changes in the content of the high-stakes college entrance exam (*gaokao*). The content of the *gaokao* is closely tied to the curriculum students study. Students who studied under the old curriculum were examined based on a *gaokao* framework that included material that was in the old curriculum; students who studied under the new curriculum were examined based on a *gaokao* framework that incorporated the revisions, additions, and deletions of the new curriculum—we extensively cite changes in the *gaokao* framework that match changes in the textbook content, in our empirical analysis, below. The fact that the new content was tested in the *gaokao* indicates that students were highly incentivized to learn it, and teachers were incentivized to teach it. Carnoy et al. (2013, ch. 6) describe the importance of the *gaokao* and the *gaokao* framework (or “syllabi”) as follows:

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<sup>7</sup>Again, see Appendix C for translated excerpts from the essay written by the chair of the committee in charge of rewriting the Politics textbook (original text at [http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830\\_824446.htm](http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm), last accessed February 9, 2014). Chinese high school students specialize in either a science track or a humanities track, with students in both tracks studying the Politics material on which we focus. While the Politics material is higher-stakes for humanities track students, students in both tracks are tested on it as part of the college entrance process. We do not find significant differences in the effects of the new curriculum by specialization track (results available upon request); thus, all of our analysis below pools students from the two tracks.

<sup>8</sup>The document is available online at <http://www.people.com.cn/GB/jiaoyu/1053/2405224.html>, last accessed February 9, 2014. See Appendix B for translated excerpts.

<sup>9</sup>The other half of the curriculum is composed of the *Cultural Life* and *Philosophy* textbooks; we felt that these were too nebulous to systematically link to the political objectives of the Chinese government. Images of the covers of old and new Politics curriculum textbooks can be seen in Appendix C.1.

<sup>10</sup>The sole exception to the rule of textbook uniformity in the Politics curriculum is Shanghai, which follows its own curriculum.

[T]he college entrance exam in China is a two-day high stakes test whose score largely determines into which college and major a student will be admitted. . . . Moreover, the curriculum in Chinese academic high schools is heavily structured around the college entrance exam. This is because most provinces in China release syllabi to high school teachers about what will generally be covered on each year's (provincial-level) exam.

Consistent with the textbook authors' claims that they adhered to the State Council's guidelines in producing the new Politics curriculum, it is clear from our analysis that several sets of striking curriculum changes were consistent with the objectives outlined in the government documents. For example, the government documents repeatedly emphasize teaching students about "socialist democracy." The new curriculum includes multiple new sections on political participation, which discuss how political decision making reflects the will of the people, explain the processes of democratic elections in villages and urban resident committees, and describe the channels through which people can voice their opinions.

More broadly, we find significant changes in textbook content and in the *gaokao* framework corresponding to the following goals outlined in government documents:

1. Students should learn about the importance of the rule of law for legitimizing the Chinese government.
2. Students should learn about Chinese democracy and political participation.
3. Students should understand and appreciate Chinese (non-market) economic institutions.
4. Students should develop an appreciation for traditional Chinese ethnic heritage.
5. Students should be conscious of environmental issues.

In Appendix D, we present an item-by-item discussion of each of these government aims: we point to their discussion in government documents; we identify changes in the Politics textbooks that match the government objectives; and, we describe changes in the *gaokao* framework that match the objectives as well. We also quote extensively from the new textbooks as we present our empirical analysis, below.

## 2.2 The introduction of the new curriculum across space and time

The mode of introduction of the revised curriculum makes China's curriculum reform an especially promising context in which to study the causal effect of a change in curriculum. Between 2004 and 2010, different Chinese provinces, in different years, introduced entirely new high school curricula and textbooks for incoming cohorts of senior high school students.<sup>11</sup> Students entering high school one year would have an entirely different three-year curriculum from that

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<sup>11</sup>The gradual introduction of reforms is typical of Chinese government policy; see, for example, Martinez-Bravo et al. (2011) on the introduction of village elections in rural China.

of students who entered high school just the year before. Students in the older, pre-reform cohort would *not* be “partially treated” because the college entrance exam was based either on the old curriculum or on the new one.<sup>12</sup>

The first entering cohorts to study under the new curriculum were students entering high school in 2004 (graduating in 2007) in the provinces of Shandong, Ningxia, Hainan, and Guangdong. Over the next six years, every other province except Shanghai saw the introduction of the new textbooks, with Guangxi, Sichuan, Guizhou, Qinghai, and Tibet finally introducing the new curriculum to entering high school students in 2010 (graduating in 2013). The introduction dates by province are presented in Table 1 and Figure 1.

It is worth stressing that the introduction date of the new curriculum was not randomly assigned across provinces. Provinces introduced the new curriculum when they had successfully trained teachers and developed supplemental materials based on the new textbooks. We discuss how non-random introduction of the new curriculum across provinces affects our identification of the causal effects of the curriculum, below.

### 3 Survey of Peking University students

We measure students’ beliefs using a web-based survey we conducted with Peking University undergraduate students in April and May 2013. The survey’s content and implementation procedure were approved by the UC-Berkeley Committee for Protection of Human Subjects, Protocol ID 2012-05-4323 (the full text of the survey is provided in the last 12 pages of the online appendix). We sent an email invitation to participate in the survey to the complete email list of undergraduate students at Peking University. Students were offered payment for their participation, and were included in a raffle for a number of desirable Apple-brand electronics. We received nearly 2,000 completed surveys, for a response rate of around 18.6% of the undergraduate population of Peking University. Participants were paid an average of 58 RMB (\$9.50), and were awarded 12 iPads and 10 iPods.<sup>13</sup>

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<sup>12</sup>It is worth mentioning that while students in different school cohorts may interact, in Chinese high schools, the vast majority of a student’s time is spent with other students in the same cohort; thus, there is limited potential for “contamination” of the old curriculum students by those treated by the new curriculum. This suggests that there may, indeed, be observable treatment effects despite the fact that such contamination (both in high school and later in college) would tend to bias estimated effects toward zero. To the extent that students in college sort into social networks according to the curriculum under which they studied, and so reinforce their attitudes, this may generate persistence of any change in beliefs caused by the new curriculum. We leave the study of mechanisms of persistence to other work.

<sup>13</sup>The recruitment email (in Chinese and in English translation) can be seen in Appendix E.1. An image of an iPad winner is provided in Appendix E.4.

### 3.1 Survey response rate

The response rate we achieved is very much in line with other online surveys that rely on impersonal, email recruitment.<sup>14</sup> Because the response rate is lower than that seen in surveys using alternative methods, it is important to discuss a range of questions about the inferences one can make from our sample. The first question that arises is one of power: even if selection into our survey were random, a low response rate can limit our ability to precisely estimate treatment effects. However, because our response rate was in line with our expectations from the literature on online surveys, our sample size is by design large enough to identify statistically significant effects of the new curriculum.

A second question is of greater concern for making causal claims: if selection into the sample were non-random, this may bias our estimated treatment effects. It is important to emphasize that for non-random selection into our sample to threaten the internal validity of our estimated effects, the selection would need to be *differential* across curricula. We can test for differential selection into the survey by curriculum in two ways. First, using information on the total number of students enrolled in Peking University by province and cohort, we can estimate the difference in response rates by curriculum, conditional on province and cohort fixed effects. In fact, we find that the (conditional) response rate differs across curricula by only around 0.1 percentage points; this suggests that there is essentially *no differential selection* into the survey according to the high school curriculum studied. As we discuss below (and can be seen Table 2, columns 7 and 8), we also find that our sample is balanced between curricula across a range of observable covariates, another indication that selection into the survey was *not* correlated with a student's curriculum of study. We also find evidence that risk preferences are statistically indistinguishable among new and old curriculum students in our sample. The lack of evidence of selection correlated with the curriculum studied indicates that we are able to estimate an internally valid causal effect of the new curriculum, conditional on being in our sample.

As an additional check that the treatment effects we estimate from the online survey do not significantly differ from what we would find among non-respondents at Peking University, we conducted a small, paper and pencil follow-up survey using in-person recruitment, in June and July, 2014 (see Appendix E.5 for a more detailed description of the follow-up survey). The follow-up survey was conducted by a team of Peking University undergraduates, who recruited survey participants in the Peking University dorms, and handed out a paper version of the same survey questionnaire as was used online (to be completed individually, and privately). Participants in the follow-up survey were reminded of the spring online survey, and were asked not to complete the in-person survey if they had already completed the online survey. The recruiters invited 446 students who had not completed the online survey to complete the paper survey; the response

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<sup>14</sup>For example, in meta-analyses, Shih and Fan (2008) and Manfreda et al. (2008) find that around one-third of online surveys examined have a response rate below 20% and over half have a response rate below 30%; see also Kaplowitz et al. (2004).

rate in the follow-up survey was 78%, for a total of 347 respondents.

We find that the estimated effects of the new curriculum in the smaller follow-up survey are qualitatively similar to those in the larger online survey, with estimated effects of the new curriculum that are never statistically significantly smaller in the follow-up survey (for one set of questions we find a significantly *larger* effect of the new curriculum in the follow-up survey; see Section 5). Thus, our findings in the online survey appear to be quite externally valid, at least within the population of Peking University students (external validity beyond this setting is discussed in Section 5.3).

## 3.2 Survey topics

The survey included sections on a broad range of topics. Here we provide a comprehensive description of the survey; we provide additional detail in Appendix E.2. Thus, although we did not register a pre-analysis plan as part of our study, this discussion allows the reader to observe the range of hypotheses that might be tested using our survey, and to interpret our results accordingly.

### **Survey questions on political attitudes discussed by the Chinese government**

We focus in this paper on a set of political attitudes that were clear priorities of the Chinese government and that were linked to changes in curriculum content. First, questions gauging students' trust in governmental officials; we complement these questions with an analysis of questions asking about students' general levels of trust. Second, questions eliciting students' attitudes toward political participation and democracy. Third, we examine students' views on free market economic institutions. Fourth, we ask students about their views of minorities vis à vis the majority Han Chinese. Fifth, we examine students' views on environmental policy.

In addition to these outcomes, we examine a set of questions on students' personal backgrounds, which we use to test for balance across curricula, and as controls in our robustness analysis. We also test whether students' perceptions of teaching practices changed along with the curriculum's content as a result of the reforms.

### **Survey questions on other political attitudes**

A second set of survey questions is of interest to us because the questions touch on important political attitudes; however, these questions are not our focus in the main text because they are not discussed in the government documents outlining the curriculum reform, are not associated with changes in the textbooks' content, or because there is some ambiguity in the government's desired attitudes. The following political attitudes are briefly examined in Appendix F. First, we examine students' attitudes toward the "wisdom of the masses"; in addition, we study students' views on political disobedience. We present results on students' reported political actions (though these are naturally limited given students' ages and time constraints). We examine students' attitudes toward bribery and unofficial payments; we study students' views on efficiency versus equity

tradeoffs; and, we examine responses to a survey question related to students' views on former President Jiang Zemin's Three Represents ideology.

### **Survey questions on non-political attitudes and beliefs**

Finally, several sections of the survey are not relevant outcomes in our current analysis of the impact of the new curriculum on students' political attitudes.<sup>15</sup> We asked students about their career preferences; their risk preferences; their approach to investing; their views on the determinants of success in contemporary China; their beliefs about the economic returns to schooling; their values; and we asked them to complete a Big Five personality traits survey and an incentivized risk preference elicitation.

### **3.3 Interpreting the survey responses**

Many of our outcome variables are self-reported responses to direct survey questions. It is natural to wonder what exactly is captured by variation in these responses. Here we discuss several concerns with using students' responses to direct survey questions to evaluate the impact of the new curriculum.

#### **Do students try to respond "correctly" to exam-style questions?**

An important concern is that students who study under different curricula may all have the same private attitudes, but if they try to provide "correct" answers to questions that are similar in structure or content to exam questions, and if the correct answer differed across curricula, then responses to exam-style questions might differ even if attitudes do not.

To address this possibility, we took care to ask our questions of interest in a manner that did not look like the questions students would have seen in the *gaokao* or any other exam. Indeed, other than a small number of factual questions related to the new curriculum, which we do not include as part of our analysis of political attitudes, the vast majority of questions explicitly asked about students' *own opinions*. Most of our questions looked nothing like exam questions, and they typically came from surveys, such as the AsiaBarometer, that had nothing to do with the analysis of Chinese education. For example, we asked students about their trust in various categories of government officials, which plausibly may have been influenced by students' study of a curriculum emphasizing the rule of law and citizen oversight of officials. Importantly, no exam ever asked students direct questions about their trust of government officials. Similarly, while students learned about socialist democratic institutions and citizens' political participation, they were not asked test questions that matched our survey questions of whether village heads are typically self-interested or serve the rich. The latter reveal opinions that plausibly were influenced by content in the new curriculum, but should not be associated with a "correct answer" under the new

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<sup>15</sup>These questions were included in order to be analyzed in other research projects on the attitudes and preferences of China's future elite.

curriculum.

One can see suggestive evidence in the distribution of students' responses that our attempts to write questions that elicited students' *opinions* were successful. While many of our outcomes are dummy variables, all of the variables we examine relating to trust in government officials are measured on a 1–5 scale, allowing one to see shifts across the distribution of attitudes (we present the distributions of responses to these questions by curriculum in the online appendix, Table A.2). A first indication that respondents are likely not attempting to provide “correct” responses is the broad range of answers to all of the questions we asked. In each curriculum, for all outcomes, we found responses in the full range, from 1 to 5, and in every case the modal response was provided by less than 60% of students. Another indication that there was not a clear “correct” answer to our questions about trust in the new curriculum (and the same holds regarding Chinese democracy) is that modal responses were not located at an end of the distribution, which one might expect if there was a clear “correct” response. Nor was there always the same modal response: we see either modes of 3 or 4 for our various outcomes.

The changes in the distribution of responses across curricula are also consistent with students' opinions changing, rather than simply a movement to a new “correct” response. One can see that for many outcomes, there are shifts in the distribution *toward* the new curriculum modal response from below, and *away* from the modal response (moving up). For example, we asked students about their trust in local government on a 1–5 scale. Under the old curriculum, the modal response was 3, with nearly 48% of students indicating this level of trust. Under the new curriculum, the mode remained 3 (indicating no change in a “correct” answer), with 45.25% of students choosing this response. Interestingly, responses of 1, 2, and the modal response of 3 are all less common under the new curriculum, while the number of responses of “4” increased by nearly 12 percentage points (over 50%).

### **Do students try to express socially-acceptable or politically correct views?**

A second concern is that students who study under the new curriculum may not have their attitudes changed, but respond to survey questions differently after learning about a different set of constraints on the views that they ought to express. While there is always a concern that students will be afraid to reveal stigmatized or politically incorrect beliefs, there are several reasons to take students' responses in our survey at face value.<sup>16</sup>

First, none of our questions touched on topics that are taboo in China, such as multi-party elections, views of the Communist Party *per se*, or direct criticism of the leadership of China. All of the questions asked, indeed, were based on topics that were discussed in Chinese high school curricula, and all of our questions were vetted by our mainland Chinese co-author (Chen); by a variety of China scholars; and, by high school teachers with whom we spoke.

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<sup>16</sup>The state's ability to shape what individuals see as acceptable expression by changing the curriculum may itself be of interest, and may have important consequences for political debate, coordination, and thus political behavior.

Second, the main survey was conducted privately, online, so there would have been no direct social stigma attached to particular responses. We also emphasized the confidentiality of students' responses in the online consent forms read prior to the survey (approved by the UC Berkeley Institutional Review Board).<sup>17</sup>

Third, as noted above, it is clear from the range of responses received in the survey that responses were not concentrated around a single "acceptable" response. Our questions regarding trust in various government officials and government bodies are perhaps the most politically sensitive of our survey questions. We find that 20% of individuals rate the central government at a 3 or below; for the provincial and local governments, this number is 38% and 65%, respectively; for courts, the army, and police, we see responses of 3 or below from 37%, 31%, and 47% of students. More students reported trust in the police at a level of "2" than at a level of "5". Clearly, some students were willing to give less than stellar marks to a range of government institutions.

Indeed, the fact that our study was run in Peking University makes it less likely that students would self-censor their beliefs out of fear of government (or peer) reprisals for expressing critical attitudes.<sup>18</sup> Peking University is known to be a setting in which liberal views can be expressed, even contrary to government aims. Indeed, the University posted an article from the *Atlantic* magazine on its website stating the following:

Peking University is known for its politically liberal professors. It was there that many of the student leaders in the 1989 Tiananmen Square democracy protests originated, and it's an open secret that teachers at the school and neighboring Tsinghua University often broach topics critical of the government in the classroom. Earlier this year, a leaked Communist Party memo warned universities that seven topics, including freedom of press and universal values, were banned from class discussions. But even still, the students currently at Peking University said these directives appear to have had little actual effect in the classroom.<sup>19</sup>

A student quoted in the article stated, "We Peking University students are very open; some of the most outstanding students in the country. Most of us are very liberal minded, so it's ok to talk about sensitive political things." This suggests that students would not have been afraid to respond honestly to our survey questions.

Finally, we examine whether students who were more risk averse (and so likely to be more concerned about responding in a socially or politically acceptable way) exhibit different effects of the new curriculum from students who are less risk averse. We find that the more risk averse respondents in the study *do not* show significantly different effects of the new curriculum.

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<sup>17</sup>The paper and pencil follow-up was also completed privately.

<sup>18</sup>Peking University students are not representative of the Chinese high school graduates. We discuss the virtues and drawbacks of our subject pool, and the external validity of our results, in Section 5.3, below.

<sup>19</sup>The article can be found at [http://english.pku.edu.cn/News\\_Events/News/Outlook/10590.htm](http://english.pku.edu.cn/News_Events/News/Outlook/10590.htm), last accessed on January 26, 2014.

## Stated preferences versus revealed preferences

As a final check that students' survey responses were meaningful, we can compare students' responses to direct questions about risk preferences to their choices in an incentivized game eliciting risk preferences, which took place after the survey. Of course, questions about risk preferences are not likely to be associated with stigmatized attitudes; however, this remains a useful check that students responded to the survey in a manner that reflects their preferences. We find a highly statistically significant relationship between self-reported risk preferences and the certainty equivalents from the incentivized game ( $p < 0.001$ ), suggesting that students' responses to our survey questions are consistent with their revealed preferences.

## 4 Empirical analysis

### 4.1 Empirical model

Using our survey data, we estimate a generalized difference in differences model, which controls for cohort and province fixed effects, and examines the effects of exposure to the new curriculum. Our baseline specification is the following:

$$y_{icp} = \sum_c \gamma_c + \sum_p \delta_p + \beta \text{NewCurriculum}_{cp} + \varepsilon_{icp}, \quad (1)$$

where  $y_{icp}$  is an outcome measure from our survey instrument ( $i$  indexes the individual,  $c$  the high school graduation cohort, and  $p$  the province of high school attendance);  $\gamma_c$  and  $\delta_p$  are full sets of cohort and province fixed effects; and  $\beta$  is the coefficient of interest, capturing the effect of the new curriculum, conditional on fixed differences across cohorts and fixed differences across provinces. In our main estimates, we allow idiosyncratic differences,  $\varepsilon_{icp}$ , to be correlated across individuals within a province  $\times$  cohort (the level at which the curriculum varies). We also show p-values from implementing the wild bootstrap (Cameron et al., 2008) allowing  $\varepsilon_{icp}$  to be correlated across all observations within a province. In addition to this baseline specification, we will estimate additional specifications below that include individual-level controls, province  $\times$  cohort-level controls, and a full set of province-specific, cross-cohort trends (in addition to the province and cohort fixed effects).

Our baseline model allows us to address a variety of concerns about our ability to identify the causal effect of the new curriculum. First, one may be concerned that province-level differences in openness, income levels, and policies may be correlated with attitudes. Because the introduction of the new curriculum was not randomized across provinces (coastal provinces introduced the curriculum earlier, for example), exposure to the new curriculum is correlated with province characteristics that may shape attitudes. However, fixed differences across provinces cannot drive our estimated effects of the new curriculum, because we control for province fixed effects and exploit

cross-cohort variation *within* provinces to identify the effects of the new curriculum. Similarly, one might worry about the evolution of attitudes across cohorts even in the absence of a change in the curriculum; by including cohort fixed effects, we are able to difference out cross-cohort changes that occur even in the absence of a change in the curriculum.

One might still be concerned about time-varying factors that affect different provinces in different years. For example, one may worry about differences in economic growth rates across provinces or about shocks, such as the Sichuan earthquake of 2008, which might differentially affect different provinces. It is important to emphasize, however, that province $\times$ time varying shocks are not necessarily province $\times$ cohort varying shocks: a confounding factor would need to differentially affect different high school graduation cohorts within a province to threaten our identification strategy. While some province $\times$ time varying shocks certainly may affect different cohorts differently, it is worth emphasizing that the cross-cohort variation we exploit is within a very narrow window, and very *sharp*: individuals entering high school just one year apart studied entirely different curricula around the introduction of the new curriculum. This method of introducing the new curriculum considerably reduces concerns about omitted variables, as many time-varying, province-specific shocks seem unlikely to have very different effects across *adjacent* cohorts of students, and so will be absorbed by the province fixed effects. For example, economic growth rates may differ between two provinces, but this will not threaten our identification strategy if the impact of a province's particular growth rate is not varying across cohorts entering high school within a four year window. Province-specific shocks, such as the Sichuan earthquake of 2008, may have had differential effects across space and time, but if the shock had a similar impact on students who were 14–17 years old at the time, this would be absorbed by our province fixed effect.

Finally, even unobserved factors that *do* vary at the province $\times$ cohort level will often affect adjacent cohorts within the same province smoothly, rather than sharply. Our specification that includes controls for province-specific, cross-cohort trends is able to capture smooth, province-specific changes in attitudes across cohorts. This specification is especially demanding (and indeed may be “over-controlling”), as it attributes to the new curriculum only the “jump” in attitudes relative to the cross-cohort trend—because we only study four cohorts of students, the “trend” estimate may capture the effects of the curriculum change (we thus view this estimate as a robustness specification, rather than use it as our baseline model). Thus, although the introduction of the new curriculum was not random across time and space, many differences across provinces and across cohorts—other than the curriculum change—are likely to be absorbed by our control variables, leaving us more confident that we are able to identify the causal effect of the new curriculum.

## 4.2 Balance of student characteristics

We limit our sample to completed surveys from individuals who entered high school between 2006 and 2009, and are current undergraduate students at Peking University.<sup>20</sup> We present summary statistics describing the demographic characteristics of the students who completed the survey in Table 2, columns 1–2, and show the mean characteristics of students by curriculum (old, then new) in columns 3–4.

We next check for balance of observable characteristics among survey respondents across new and old curricula. As discussed above, lack of balance could arise from differential selection into the survey sample; for example, because the new curriculum has an effect on attitudes (e.g., towards foreigners, towards opinion surveys, etc.). In addition, a lack of balance might arise from shifts in matriculation into Peking University as a result of the curriculum change (or some other province  $\times$  cohort-specific shock).<sup>21</sup>

In Table 2, columns 5 and 6, we present the raw differences, and the p-values testing for the statistical significance of these differences in characteristics of students who studied under the old and new curricula in our sample. One can see in the table that there are significant differences across the two groups. However, it is worth emphasizing: this *unconditional* imbalance is to be expected. Students who studied under the new curriculum are younger on average (the new curriculum was introduced later in time), and come from provinces where the curriculum was introduced earlier—and there was no random assignment of introduction years across provinces, so differences across students from different provinces appear as well (for example, the fraction of Han Chinese).

In Table 2, columns 7 and 8, we show differences between students in the new and old curricula, conditional on province and cohort fixed effects, and the p-values testing for the statistical significance of these *conditional* differences. One can see that accounting for average characteristics in the province of origin, and accounting for average characteristics of a cohort, those individuals in our sample who studied under the new curriculum look nearly identical on observable characteristics to those who studied under the old curriculum. This suggests that our difference in differences design, by exploiting the variation in curriculum conditional on province and cohort fixed effects, will compare outcomes across individuals whose observable characteristics look identical.<sup>22</sup>

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<sup>20</sup>Including incomplete surveys or individuals who did not follow the standard, direct route from high school to college does not change our results (available from the authors upon request).

<sup>21</sup>One might be particularly worried that the new Politics curriculum selected into Peking University students with particular political attitudes. We thus examine attitudes among students who studied the science track in high school, whose Politics scores (and, presumably, political attitudes) were far less determinative of their college entrance exam results. We find that there are no significant differences in our findings between students who studied the humanities and science tracks in high school, suggesting that our findings are not driven by selection into Peking University according to students' political attitudes.

<sup>22</sup>Because these variables are nearly all pre-determined, one can think of Table 2, columns 7 and 8, as providing a set of falsification tests for our difference in differences design, all of which are passed.

### 4.3 Changes in political attitudes

Here we present baseline estimates of the effects of the new curriculum on our full set of outcomes. We present results for five categories of outcomes: (i) trust in government officials; (ii) views on political participation and democracy; (iii) views on unconstrained markets; (iv) views of minorities; and, (v) views on the environment. The shaping of each category of attitudes was explicitly mentioned in government documents describing the objectives of the reform (for a detailed discussion of each category, see Appendix D). It is worth noting again that this is not an exhaustive examination of our survey outcomes, nor is it an exhaustive analysis of the changes in the textbooks. Rather, it is a comprehensive analysis of changes in students' attitudes in response to curriculum changes that matched the political aims of the government in designing the reformed curriculum.

For each category, we present our findings one outcome (that is, one survey question) at a time. We also construct an index variable of the various outcomes within each category following Anderson (2008). The index for each category will both capture broad attitude changes that are only imperfectly captured by any single outcome variable and will help address concerns about multiple hypothesis testing by reducing the number of hypotheses we test.

Because our analysis involves testing multiple hypotheses, an important question is how to make appropriate statistical inferences in the face of a greater likelihood of Type I error. In addition to examining the effects of the new curriculum on broad indices, for each of our individual outcomes, we present p-values which are adjusted using the false discovery rate (FDR) procedure (Benjamini et al., 2006; Anderson, 2008), in addition to standard p-values calculated using standard errors clustered at the province  $\times$  cohort level.<sup>23</sup> In addition to these p-values, we will also show p-values from implementing the wild bootstrap (Cameron et al., 2008) allowing  $\varepsilon_{icp}$  to be correlated across all observations within a province.

#### 4.3.1 Outcome category 1: Trust in government bodies

It is clear from the government documents on curriculum reform that a high priority was to teach students about institutions that legitimized the Chinese government and its officials, especially adherence to rule of law. For example, the new curriculum's *Political Life* textbook includes a new section titled, "Where does government's authority come from?" which states (p. 49):

Where does the Chinese government's authority manifest itself? A government with authority must be a government under the rule of law. It guards the ultimate authority of the constitution and the legal system, and hence protects people's fundamental rights and benefits.

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<sup>23</sup>There are still other, even more conservative, methods (e.g., the Bonferroni correction) that could be used to adjust our statistical inference. Given the size of our sample and the estimated treatment effect sizes, we believe that our approach appropriately balances concerns about Type I and Type II errors.

The new curriculum's *gaokao* framework reflects the changes to the textbook, with added sections in the *Political Life* module on the functions and duty of Chinese government, the principles of the Chinese government, and the significance and necessity of rule of law. Thus, the first set of attitudes we examine is trust in government officials and in a range of government bodies—a natural outcome of viewing government institutions as more legitimate, and certainly an outcome desired by the Chinese government. It is worth emphasizing that greater trust in government officials is *not* a topic that was explicitly tested under either the new or old curriculum, but rather is an attitude that seems closely connected to the content introduced in the new curriculum.

To gauge students' trust in a range of government bodies and officials, we first asked students to describe their trust in the central, provincial, and local governments on a 1–5 scale (questions 3.1–3.3). We also asked them to describe their trust in courts, the armed forces, and the police, again on a 1–5 scale (questions 3.4–3.6). Finally, we asked students how strongly they agreed with the statement that village heads put their interests ahead of those of the people, and also how strongly they agreed with the statement that village heads cared primarily about the rich and powerful (questions 3.7–3.8). Throughout our analysis, we code student responses such that attitudes consistent with the government's desired views are coded as larger numbers; so for the latter two questions, strong disagreement (indicating more positive views of village heads) is coded as "5", while strong agreement (more negative views of village heads) is coded as "1".

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3.1–6	Describe your level of trust in the following institutions: (1) Central government; (2) Provincial government; (3) Local government; (4) Courts; (5) Armed forces; (6) Police. (1 = complete distrust; 5 = complete trust)
3.7	Village heads put their own interest before those of people. (1 = fully agree; 5 = fully disagree)
3.8	Village heads care primarily about the powerful and rich people, and neglect the interests of ordinary people. (1 = fully agree; 5 = fully disagree)

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**Results** As we did above, we begin by presenting our findings one outcome at a time; then, because we are testing multiple hypotheses throughout our work, we also collapse the various groups of questions into an index for that group, and test for the curriculum's effect on the index. One can see in Table 3, columns 1–6, that *every* category of government official or institution is more trusted by students exposed to the new curriculum. In addition, in Table 3, columns 7–8, one sees that students who studied under the new curriculum view village heads as less driven by their own interests or by the interests of the rich and powerful. For each outcome, in addition to showing the coefficient estimate and clustered standard error, we also show the p-value associated with our estimate, the FDR adjusted p-value that takes into account the multiple hypotheses being tested in a particular category of outcomes, and the p-value from implementing the wild bootstrap. One can see in Table 3, columns 1–8, that even our most conservative statistical inferences suggest statistically significant effects of the new curriculum on four of the eight outcomes

(at the 10% level or better).

We next present the estimated effect of the new curriculum on an index variable constructed from the eight outcomes related to students' trust in government officials. To construct the index, we standardize each component and sum individuals' standardized outcomes, weighting each outcome by the inverse of the covariance matrix of the standardized outcomes, following Anderson (2008).<sup>24</sup> The rationale for this procedure is twofold. First, one avoids the pitfalls of "overtesting" that occur when many individual hypothesis tests are conducted. Second, the index provides a test of whether the new curriculum has an effect on a set of related outcomes, which might all be caused by one underlying latent variable.<sup>25</sup> The results from a regression using this z-score index as the outcome point to a strong and statistically significant effect of the curriculum in the direction desired by the Chinese government, resulting in a change in the "trust index" of about one quarter of a standard deviation (see Table 3, column 9).<sup>26</sup>

Relative to variation in attitudes associated with students' observable characteristics, the new curriculum has a large effect: when we add student characteristics to our baseline model, we find that a student's membership in the Communist Youth shifts beliefs in the government's desired direction by 15% of a standard deviation; having parents in the CCP moves beliefs in the desired direction by around 3% of a standard deviation in the "desired" direction. Strikingly, studying under the new curriculum moves beliefs in the desired direction by around 25% of a standard deviation. The magnitudes of our estimated effects in terms of persuasion rates are also large (we discuss these in Section 5.2).

These results suggest a large causal effect of the new curriculum on how students view Chinese government officials and government bodies. A natural question that arises in interpreting the results, and putting them in context, is whether the new curriculum simply changed trust more broadly, not only trust in government officials. As a "placebo" exercise, we thus examine students' responses to questions about their trust in a variety of non-governmental entities (NGOs, banks, foreign investors) and about their trust in people in general. An aggregate index of trust in these non-governmental entities and individuals is *not* affected by the introduction of the new curriculum (the point estimate close to zero and not significant—see Table 3, column 10), reinforcing our interpretation that the content in the new curriculum specifically increased trust in Chinese government officials.

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<sup>24</sup>We also standardize the z-score to allow for easier interpretation of the magnitude of the coefficient estimate. Other methods used to construct a single variable that summarizes a set of related outcomes, for example, an equally-weighted average of the standardized outcomes, or the first principal component of the set of outcome variables, generate very similar results (we present a broad set of results using first principal components in Appendix F).

<sup>25</sup>Such index variables have been used elsewhere to evaluate the effectiveness of policy interventions on a set of related outcomes; see, for example, Kling et al. (2007).

<sup>26</sup>We also asked students about their views on the prevalence and efficacy of unofficial payments; these attitudes are extremely important in the Chinese context. As we discuss in Appendix F, we find that students view unofficial payments as less effective and less prevalent if they studied under the new curriculum, consistent with the goals of the curriculum change.

### 4.3.2 Outcome category 2: Views on political participation and democracy

The second set of attitudes we examine is views on political participation and democracy, the shaping of which was a high priority for the Chinese government. Reflecting this, the new *Political Life* textbook includes entirely new sections on political participation and electoral institutions. Importantly, the new curriculum did not simply advocate unfettered political expression and action—it highlights the institutions allowing for political participation in China, while drawing a clear distinction between orderly and disorderly civil participation. The new *Political Life* textbook specifically discusses civic participation at the local and township levels, discussing local elections, and the supervision of the local government. For example, the *Political Life* textbook, pp. 17–18, includes a new section titled, “Cherish your voting rights,” which states:

Voters’ attitudes and abilities with respect to elections are the key factors that influence the impact of elections. Citizens have to continue improving themselves in participating in democratic elections, so that they can exercise their voting rights well. Only then can citizens be able to better manage China’s national and social affairs, as well as its economic and cultural matters. [...] Whether one actively participates in elections is a critical measurement of a citizen’s sense of participation and responsibility.

The new sections in the textbook are reflected in the *gaokao* framework for the new curriculum, as well. The framework includes the following new modules in the *Political Life* component: “Channels for Chinese citizens’ participation in political life”; “Multiple ways for citizens to participate in democratic decision-making”; “The meaning and significance of China’s villages and urban dwellers governing themselves”; and, “Citizens need to realize their democratic supervising rights responsibly”.

Based on the curriculum changes, we asked students several survey questions related to democracy and political participation. We asked students whether they believed that, in reality, ordinary citizens affected the selection of village heads (question 4.1). We also asked students how democratic they believed China to be on a 1–10 scale, with 10 being more democratic (question 4.2). Finally, we asked about students’ views on the meaning of “democracy”: did more students believe that the concept implied the people’s participation in the political process (question 4.3)?

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- 4.1 In reality, ordinary people are able to influence who becomes the village head. (1 = totally disagree; 5 = fully agree)
  - 4.2 Where would you place our country under the present government? (1 = completely undemocratic; 10 = completely democratic)
  - 4.3 Which of the following do you think are characteristics of a democracy? (1 = “People’s participation in the political process” listed first; 0 = otherwise)
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**Results** Again we begin by presenting our findings one outcome at a time, then collapse the individual survey questions into an index variable for the category of outcomes. In Table 4, columns 1

and 2, one can see that studying under the new curriculum leaves students more likely to believe that ordinary people have influence over who becomes the village head, and that China is more democratic (both results are statistically significant at 10% or less using standard p-values, FDR-adjusted p-values, or bootstrapped p-values). In Table 4, column 3, one can see that students who studied under the new curriculum more commonly choose “People’s participation in the political process” as the defining characteristic of a democracy, though this shift is not statistically significant. In Table 4, column 4, we present the results using an index constructed from the three outcomes related to students’ views on political participation and democracy, and find a significant effect of the new curriculum in the direction desired by the Chinese government, with a magnitude of around one-fifth of a standard deviation.<sup>27</sup>

### 4.3.3 Outcome category 3: Views on markets

Government documents shaping the new curriculum emphasized the importance of the “socialist market economy” for economic and social development. We next consider the impact of the new curriculum on students’ views on the free-market economic system. In the new *Economic Life* textbook, many sections emphasize the “socialist market economy,” in which markets are complemented or corrected by state or socialist institutions. For example, the important role of state-owned enterprises is made clear in the new curriculum’s *Economic Life* textbook (p. 31):

Just like the pillars that support skyscrapers, state-owned-enterprises (SOEs) are the backbone of China’s domestic economy. They control the life vessels of the economic system, and play a vital and leading role in the system. To develop, expand and strengthen the SOEs is of critical importance, to demonstrate the superiority of socialist system, to strengthen China’s economic power, national defense power, as well as ethnic unity. They can also elevate the international position of China.

Social inequality—a major threat to Chinese political and social stability—is explicitly linked to market institutions. The new *Economic Life* textbook (p. 81) states:

[A]llowing markets alone to allocate resources will lead to inefficiency and waste, as well as socioeconomic instability. Market functioning alone can also result in economic fluctuations and chaos, unfair redistribution, widening income gaps, and even cause severe polarization.

In addition, the new curriculum cut out an entire section on the market economy that emphasized its virtues. The *old* curriculum’s section titled “General characteristics of a market economy” described markets as “equal (or just),” “competitive,” “under rule of law,” and “open.” This material was removed from the new curriculum. Many changes in the *gaokao* framework

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<sup>27</sup>We do not find significant effects of the new curriculum on students’ reported voting or protesting behavior (see Appendix F). This is perhaps not surprising given that Chinese students have very little time or opportunity to engage in such political acts. We discuss the relationship between stated attitudes and political behavior in more detail below.

also emphasize the important role of the state in the economic system. In the *Economic Life* section of the framework, new sections include “sustainable and balanced economic development;” “public-ownership structure should play a major role;” and, “multiple ownership structures develop simultaneously.”

To test whether exposure to the new curriculum shaped students’ views on economic institutions, we asked the following survey question:

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- 5.1 From the following statements on a market economy, choose one that you agree with the most:
- (a) A market economy is preferable to any other form of economic system.
  - (b) For people like me, it does not matter whether the economic system is organized as a market economy or as a planned economy.
  - (c) Under some circumstances, a planned economy may be preferable to a market economy.
- 

We convert students’ responses into a dummy variable indicating skepticism of the market economy, equal to 1 if individuals *did not* select the “market economy preferable” response.<sup>28</sup>

**Results** In Table 5, we show the estimated effect of the new curriculum on students’ skepticism toward the market economy. One can see that the fraction of students who reject the view that a market economy is preferable to any other economic system is over eight percentage points greater among students who studied under the new curriculum compared to those who studied under the old curriculum (this difference is statistically significant at 10% or less calculating a standard p-value, the FDR-adjusted p-value, or the bootstrapped p-value).

#### 4.3.4 Outcome category 4: Views on minorities (Han students/Minority students)

The Chinese government made it a high priority to cultivate a traditional national spirit; the government’s aim was to teach (majority) Han Chinese students that minority groups within China share with them a Chinese ethnic heritage, and to increase minorities’ identification with being “Chinese.” Our fourth set of outcomes examines the effects of the new curriculum on Han students’ views on minorities, as well as minorities’ views on their own identity. The new *Political Life* textbook adds (p. 72) an entire section titled “Principles of dealing with relationships among ethnic groups: equality, unity, all prosperous together.” The new *Cultural Life* textbook adds two sections (pp. 71–81) titled: “The Eternal Chinese Ethnic Spirit” and “Promoting the Chinese Ethnic Spirit.” The main argument in these sections is that multi-ethnic unity is the core of Chinese culture. The emphasis on ethnic and national “unity” in the new curriculum is striking: the new curriculum’s *Political Life* textbook (p. 75) states:

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<sup>28</sup>Coding the survey responses in other ways—for example, a dummy variable indicating support for a planned economy or running a multinomial logit—yields very similar results.

It is every Chinese citizen's responsibility to abide by the Constitutional duty that one has to guard national and ethnic unity and harmony. As a youth in China today, we need to put our responsibility to develop Socialist multi-ethnic harmony into action.

The new curriculum's *gaokao* framework also added new sections regarding Chinese ethnic unity: "promote Chinese ethnic spirit" and, "the core of Chinese ethnic spirit."

We separately analyze the effects of the new curriculum on the attitudes of Han Chinese students toward minorities (columns 1–4 of Table 6) and on minority students' views on their own identities (columns 6–9 of Table 6). Some questions are relevant only for Han students or only for minorities, while others appear in both sections of Table 6:

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- |       |  |
|-------|--|
| 6.1   | Generally speaking, would you say that people in minority groups can be trusted, or that you cannot be too careful in dealing with them? (1 = cannot be too careful; 5 = completely trustworthy)   |
| 6.2/6 | China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree with more? (a) Comparing to Han Chinese, ethnic minority groups are relatively independent groups. (coded as "0") (b) Ethnic minority groups are the same as Han Chinese, and they are all Chinese people. (coded as "1")                                  |
| 6.3/7 | China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree with more? (a) Ethnic minority groups share the same historic heritage and cultural traditions as the Han Chinese. (coded as "1") (b) Ethnic minority groups have different historic heritage and cultural traditions from the Han Chinese. (coded as "0") |
| 6.4/8 | Can you imagine yourself marrying a member of a different ethnic group in the future? (dummy variable with "Yes" coded as "1")   |
| 6.9   | Where would you place your identity on a spectrum, with being Chinese on one end (5) and being a world citizen on the other end (1)?   |
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**Results** We begin by studying the new curriculum's effects on Han Chinese students. We consider Han students' trust in minority individuals; Han students' views on whether minorities are similar to, and share their ethnic heritage with, the majority; and Han students' willingness to marry someone from a different ethnic group. In Table 6, column 1, one can see that Han Chinese who studied under the new curriculum are actually slightly less likely to declare that they trust individuals from minority groups. With regard to Han students' view of minorities' independence relative to the dominant Han ethnicity, Table 6, columns 2 and 3, show that the new curriculum induces Han students to think of minorities as more similar (also in terms of heritage) to Han Chinese (though the effects are not statistically significant). Finally, Han students exposed to the new curriculum are significantly more likely to declare that they would be willing to marry someone from a different ethnic group (column 4). The index combining these four individual outcomes shows a positive, but statistically insignificant effect of the new curriculum (Table 6, column 5).

We next examine the new curriculum's effects on minority Chinese students. We first consider minority students' views on whether minorities share the same identity and ethnic heritage with the majority Han (Table 6, columns 6 and 7), and we find small, statistically insignificant effects. We next examine minority students' reported willingness to marry outside of their ethnic group, and again find a small, statistically insignificant difference in responses across curricula (column 8). Finally, we examine whether the new curriculum affected minority students' sense of Chinese identity, relative to having an international identity (column 9), and here we find a statistically significant, positive effect.<sup>29</sup> Overall, the index combining the four individual survey outcomes indicating minority students' views shows a positive effect of the new curriculum, although it is not statistically significant (Table 6, column 10).

#### 4.3.5 Outcome category 5: Views on the environment

Government documents structuring the curriculum reform mention consciousness of the environment as a value that ought to be instilled in Chinese students. While not a prominent element of these documents, environmental issues were highlighted by former President Hu Jintao; also, attitudes toward the environment will shape public policy on a critical domestic and global issue, and so are of particular interest. The new curriculum, indeed, includes additional content discussing environmental issues, in the *Economic Life* textbook (pp. 87–90). The new curriculum's *gaokao* framework includes new sections in the *Economic Life* module titled "scientific outlook on development" and "sustainable and balanced economic development", which include discussions of environmental issues.

To gauge how students prioritize environmental concerns, we included the following survey items:

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- 7.1 Would you be willing to give part of your income or pay more taxes, if you were sure that the extra money was used to protect the environment?
  - 7.2 People often talk about what the goals of this country should be for the next ten years. Listed below are some common goals for a nation. Please pick the one that you consider as primary for a nation. (a) A high level of economic growth; (b) Maintaining economic stability; (c) Maintaining order in the nation; (d) Giving people more say in important government decisions; (e) Protecting the environment.
  - 7.3 Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view? (a) Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs. (b) Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent.
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<sup>29</sup>Note that we do not include in Table 6 the estimated effect of the new curriculum on Han Chinese students' degree of Chinese identity, as we did not expect this to be affected by the new curriculum.

**Results** In Table 7, columns 1–3, we show the estimated effects of the new curriculum on responses to the three survey questions. As dependent variables, we use a dummy indicating whether the response was “yes” in question 7.1; a dummy indicating whether option (e) was chosen in question 7.2; and, a dummy indicating whether option (a) was chosen in question 7.3. In no case do we find a significant effect—indeed, preferences are slightly less “pro-environment” among students who studied under the new curriculum across all three questions. The aggregate z-score index (column 4) shows a negative, marginally insignificant effect of about one sixth of a standard deviation. One possible interpretation of the negative estimated effect of the new curriculum on attitudes toward the environment is that protection of the environment may be seen as being in conflict with another of China’s major policy aims—maintaining rapid economic growth.

## 5 Discussion

In this section, we first present a variety of robustness tests and additional empirical specifications that support our baseline findings; next, we try to benchmark the magnitudes of our results, comparing the “persuasion rates” we find with those found by other scholars, and also presenting evidence from the AsiaBarometer survey of a significant association between reported political attitudes and behavior; finally, we discuss the external validity of our results.

### 5.1 Robustness checks and ruling out alternative hypotheses

We next explore the robustness of the results seen above for all five of the categories examined (note that one category—views on minorities—has two components: Han students’ views and minority students’ views), and also try to rule out alternatives to our interpretation of our estimates as the *causal* effects of the curriculum change. Rather than present every robustness specification for each individual outcome in all categories, we show robustness specifications only for the z-score indices constructed to summarize each category’s outcomes.<sup>30</sup>

#### Concerns about the online survey response rate

An important question about our baseline estimates is whether they were driven by the relatively low response rate in our online survey. Above we noted that response rates between students under the two curricula are statistically indistinguishable, and that student characteristics in our sample are balanced (conditional on province and cohort fixed effects) across curricula. To more directly test whether the new curriculum had similar effects on students who did not respond to our online survey, we next examine the effects of the new curriculum on the students who completed our paper and pencil follow-up survey, which had a response rate of 78% (see Appendix E.5 for details).

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<sup>30</sup>For the single outcome relating to views on the market economy, we use the question asked (because there is no index) for all the robustness specifications.

We estimate our baseline specification (including province and cohort fixed effects) examining the index variable outcomes for each category of attitudes studied above, and find that the estimated effects of the new curriculum in the follow-up survey sample are quite similar to the effects in the online survey sample (see Table 8).<sup>31</sup> Studying under the new curriculum is estimated to have a positive, 0.13 standard deviation effect on trust in government officials; a positive 0.11 standard deviation effect on attitudes toward democracy and political participation; an 8.5 percentage point effect on skepticism toward free markets (in the government's desired direction); a one-half standard deviation effect on Han students' views of minorities (in the government's desired direction); and, a negative 0.15 standard deviation effect on attitudes toward the environment. All of the estimated effects qualitatively match what was found in the online survey; the only statistically significantly different estimate is that Han Chinese students' views of minorities are moved significantly more in the direction desired by the Chinese government in the follow-up survey.<sup>32</sup> Although the follow-up survey sample is not large enough to precisely estimate the effects of the new curriculum, the qualitative similarity between the estimated effects of the new curriculum in the online survey and the in-person follow up is reassuring.

### **Robustness to including control variables and province-specific trends**

In our baseline estimates (reproduced in Table 9, Panel A) we estimated the effects of the new curriculum using a parsimonious specification that included only province and cohort fixed effects. Because the new curriculum was not randomly introduced across provinces, however, one might wish to test whether including controls for students' characteristics has an effect on our estimates (though balanced characteristics across curricula suggest that this will not have a large effect). We thus examine how robust are our baseline estimates to the inclusion of various control variables, beginning with student-level controls for the individual characteristics reported in Table 2. In Table 9, Panel B, one can see that including these individual-level controls does not qualitatively affect our findings: the estimated effect of the new curriculum on trust in government officials and democracy are somewhat larger than in the baseline, while the effect of the new curriculum

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<sup>31</sup>We did not reach a large enough number of minority students in the follow-up survey to estimate the effects of the new curriculum on minority students' views on their own identities, so this category is not included in the table.

<sup>32</sup>While the estimated effects of the new curriculum are smaller for the trust and democracy categories, closer examination of the individual survey outcomes suggests that this is likely due to noise, and not to a smaller effect of the new curriculum. When we examine the individual survey questions on trust in government officials and government bodies, we find that the effects of the new curriculum are *larger* in the follow-up sample for the central government, provincial government, and the army outcomes. Effect sizes are very similar for trust in the police and for the question regarding the village head serving the rich and powerful. Effect sizes are *smaller* in the follow-up survey for the trust in local government question and the question regarding the village head being self-interested. When we examine the individual questions regarding democracy and political participation, we find that there is a substantially larger effect of the new curriculum in the follow-up survey on students' views on how democratic is China's government. The effect of the new curriculum is similar (slightly smaller in the follow-up) for the question regarding the role of people's participation in democracy. There is a smaller effect in the follow-up survey on the question regarding the ability of people to affect who is the village head. Overall, we do not see a consistent pattern in the individual questions suggesting a smaller effect of the new curriculum in the follow-up survey.

on skepticism toward markets is slightly smaller. Views on minorities are quite similar, and attitudes toward the environment continue to move away from the direction desired by the Chinese government.

Another important question about our analysis is whether the introduction of the new curriculum coincided with changes in government spending on schools at the province  $\times$  cohort level. If school spending was greater for those cohorts in a province exposed to the new curriculum, some of our effects may be driven by school spending, rather than changes in the curriculum's content. We thus collected data on provincial spending on secondary education at the province  $\times$  cohort level (we use a province's average level of spending during the three years of senior high school for each cohort).<sup>33</sup> One can see in Table 9, Panel C that the estimated effects of the new curriculum controlling for spending on secondary education at the province  $\times$  cohort level are nearly identical to the baseline estimates.

One may also be interested in determining whether differing trends in attitudes across cohorts in different provinces may play some role in generating the differences in attitudes we attribute to the new curriculum. For example, it may be the case that views on markets follow different trends in different provinces, and that these trends show up as effects of the new curriculum. As a first step toward addressing concerns about differences in cross-cohort trends in attitudes driving our results, we estimate equation 1, but include a full set of province fixed effects interacted with cohort-level trends. That is, we allow each province to have its own (linear) trend in attitudes across cohorts, and we identify the effect of the new curriculum as a *deviation from the trend*. Note that this may be "over-controlling", given that we only have 4 cohorts per province, and limited variation in the timing of the new curriculum's introduction across provinces. It is possible that the province-specific trend will pick up some part of the variation actually due to the (sharp) introduction of the curriculum. In Table 9, Panel F, one can see that controlling for province-specific cross-cohort trends does not qualitatively affect any of our estimates of the effects of the new curriculum; and, we continue to see that the new curriculum is associated with different levels of trust in government officials, different views on democracy in China, and greater skepticism toward markets.

### **Testing for pre-treatment trends, and post treatment trend *breaks* in outcomes**

As another test for the presence of pre-existing trends in attitudes, we next estimate the model in equation 1, but rather than pool the students who studied under the old curriculum and new curriculum into two categories, we allow students to have different attitudes depending on the "distance" between their cohort and the first cohort that studied under the new curriculum in their province. We treat the last cohort studying under the old curriculum in a particular province as the omitted category, and examine attitudes for cohorts entering high school two or more years

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<sup>33</sup>Data are taken from the *China Educational Finance Statistical Yearbook*, published by the Finance Department, Ministry of Education of the People's Republic of China (2004–2012).

ahead of the curriculum change, as well as the attitudes of the first cohort that studied the new curriculum, and the cohorts that entered high school two or more years after the curriculum was introduced.

We present coefficients and 95% confidence intervals on the dummy variables indicating a student's cohort relative to the introduction of the new curriculum in Figure 2, for each of the five main index variable categories (with two outcomes for views on minorities). One can see that across categories, it is never the case that students who entered high school two or more years prior to the curriculum change (and studied the old curriculum) have attitudes that differ from students in the final cohort that studied the old curriculum. That is, there is no significant pre-treatment difference in attitude levels. One can see that the very first cohort studying under the new curriculum shows sharply different attitudes from the last cohort studying under the old curriculum for the trust, democracy, and skepticism of markets outcomes (and the differing attitudes appear among students who studied the new curriculum after the first cohort exposed to it). There is some evidence of small pre-treatment trends in trust of government officials and views on democracy in China, but there is also a visible change in the trend at the time the new curriculum was introduced (consistent with our findings when including province specific cross-cohort trends, above).

### **Estimation using a "short panel"**

One might also be concerned about the effects of our sample's composition on the estimated treatment effects. Some provinces do not have any variation in curriculum studied among the four cohorts in our sample, but these provinces are included in our baseline estimates. Some provinces in our sample have two cohorts studying under each curriculum; some have three cohorts under one curriculum and one under the other. One might wish to estimate the effects of the new curriculum on a balanced panel that includes only provinces in which we observe variation in curriculum. We thus estimate the effect of the new curriculum using a "short panel" that includes only students from the last cohort under the old curriculum and the (adjacent) first cohort of the new curriculum, from the 13 provinces for which we observe students from *both* of these cohorts in our sample. (A longer balanced panel, for example, examining provinces that have exactly two cohorts under each curriculum, only includes 4 provinces; thus we prefer the short balanced panel.) We present the results in Table 10: one can see that using this alternative dataset, our results are very similar to those estimated using the entire set of province  $\times$  cohort cells.

### **Falsification exercises using placebo treatments**

Because we have a relatively small number of treated observations in our sample, we next make our statistical inferences in an alternative manner, by comparing the treatment effect we estimate for each index outcome to the distribution of placebo treatment effects we estimate when *randomly* assigning new curriculum introduction dates to provinces. To be precise, we randomly assign new

curriculum introduction dates to provinces, with the dates drawn from the *actual* set of introduction dates of the new curriculum, without replacement (so in a given year, the same number of provinces have the placebo new curriculum introduced as had the actual new curriculum introduced, but the placebo assignment will be to a random selection of provinces). We randomly draw 10,000 sets of placebo treatment assignments, and estimate equation 1, for each of the five main index variable categories (with two outcomes for views on minorities).

We plot the distribution of t-statistics from the 10,000 estimated placebo treatment effects for each outcome, in Figure 3, and mark in the figure the location of the t-statistic of the *actual* treatment effect within the placebo treatment effect distribution. We also report the share of the placebo t-statistics that is larger than the actual statistic, in absolute value. One can view this measure as analogous to a p-value in this placebo exercise. Across the outcomes considered, one can see that the inferences drawn are very similar to the standard regressions.

### **The impact of changes in instructional methods**

In addition to changing the content of textbooks, the curriculum reform intended to shift teaching *practice*: for example, class discussions were to be encouraged, and there was to be a reduced emphasis on the rote memorization of material by students. One might be concerned that shifts in teaching practice may have directly affected students' attitudes, or affected students' willingness to think independently or to express certain opinions, thus affecting responses to our survey (see, e.g., Algan et al., 2013, on the importance of teaching practices in shaping students beliefs and attitudes). However, as noted above, there is a widespread perception that teaching practices did *not* change as a result of the reform: teachers' and students' incentives were still strongly directed toward the memorization of textbook content in order to succeed in the *gaokao* college entrance exam.

To determine whether students' perceptions of their teachers' methods differed across curricula, we asked several survey questions relating to teaching practices that the reforms may have changed: we asked whether teachers encouraged class participation; whether students explored answers on their own (as opposed to being told correct answers up front); and, whether memorizing material was important to doing well in school. From these individual questions, we constructed an index of standardized outcomes that captures changes in students' perceptions of teaching practices (the components of the index were all coded such that a positive change in the index indicated change in the direction desired by reformers). In addition to this index, we also directly asked students, "how much do you think class/lecture or teaching activity is centered on *gaokao* preparation?" In Table 11, we present the estimated effects of the new curriculum on the teaching practices index (column 1), and on students' perceptions of the focus of teaching on *gaokao* preparation (column 2). One can see that the new curriculum had no effect on the teaching methods index or on students' perceptions of teachers' focus on *gaokao* preparation.<sup>34</sup> Thus, we

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<sup>34</sup>The teaching methods index shows an increase in reported exploration for answers, but an increase in reported

do not believe that changed teaching practices concurrent with the textbook reform explain our findings.

## 5.2 Benchmarking the effect sizes

### Persuasion rates

In order to quantify the magnitude of the effect of the new curriculum, we compute persuasion rates (DellaVigna and Gentzkow, 2010): the estimated percentage of individuals who did not initially hold the view that the new curriculum aimed to instill (the “desired belief”), but who did hold the belief if they were exposed to the new curriculum. We can calculate this as the estimated treatment effect of the new curriculum divided by the share of students who do not hold the desired belief in the entire sample; we call this the “unconditional” persuasion rate.<sup>35</sup>

A more correct definition of the persuasion rate would require us to divide the effect of the new curriculum by the share of students without the desired belief among individuals who studied under the *old curriculum*; however, the compositional differences (by province and cohort) in the sample between old and new curriculum students would distort the results. As an alternative, we estimate the fraction of individuals who would hold the desired belief in the absence of the new curriculum. To do so, we predict students’ beliefs using our baseline regression model, but for students who studied under the new curriculum, we subtract the treatment effect of the new curriculum. We then average the predicted outcomes for those who studied under the new curriculum and the old curriculum, and use this to calculate the fraction of the sample who would not hold the desired view in the absence of the new curriculum. We then use this share to compute the “conditional” persuasion rate.

Throughout the presentation of regression results in Tables 3–6, we presented estimates of the implied unconditional and conditional persuasion rates.<sup>36</sup> The persuasion rates we find are substantial: across all outcomes (including those for which the effects did not go in the desired direction), the median unconditional persuasion rate was 23% and the median conditional persuasion rate was 20%. These numbers are high relative to estimates of persuasion rates found for various media in prior work; for example, DellaVigna and Kaplan (2007) find a persuasion rate from Fox News of approximately 3–8%, and DellaVigna et al. (forthcoming) find a persuasion rate of 4–5% for Serbian radio in Croatia.

Our estimated persuasion rates are novel in that they come from a type of oblique belief transmission different from mass media. It is plausible that persuasion rates for educational content

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memorization as well; the net effect on the index is almost no difference across curricula.

<sup>35</sup>For a binary outcome variable, this is straightforward; for questions that do not have a binary outcome we calculate the persuasion rate based on a transformed dependent variable, which equals one if the outcome is greater than or equal to the median answer. In our tables, we always present the the main regression results, i.e., the estimate of the treatment effect of the new curriculum, based on the original data (for example, on a scale from 1 to 10), while the persuasion rates reported at the bottom of the table are calculated with the binary analog.

<sup>36</sup>We did not report persuasion rates for attitudes toward the environment, Table 7, as students were not, on average, persuaded by the new curriculum to hold the government’s desired attitudes.

are considerably larger than those for media—owing, for example, to the intensity of exposure, and perhaps to the greater pliability of youths' views.<sup>37</sup> An important question regarding the nature of the persuasion we observe is to what extent it was based on the provision of new information, as opposed to purely ideological, persuasive content. On the one hand it is clear that there was new, purely ideological content introduced in the new curriculum—this can be seen in several of the quotes from the new curriculum's textbooks above. On the other hand, there were factual additions to the new curriculum, for example the institutions of village level and People's Congress elections were described in new sections of the new textbooks. We surveyed students to determine whether more students who studied under the new curriculum were aware of these electoral institutions, and find evidence that the new curriculum was associated with greater factual knowledge regarding elections in China.<sup>38</sup> Thus, the persuasion we observe may result from a combination of exposure to new factual information and to ideological content.

### **Stated preferences and behavior**

Many of the views elicited in our survey are on topics that are of great political, economic, and social importance, and understanding how educational content shapes these political attitudes is of interest *per se*. It is also interesting to consider how differences in political attitudes correspond to differences in political behavior. While the students in our Peking University survey have had little opportunity to engage in many political activities of interest—because of their status as Peking University students, because of their workloads, because of their ages, and because they live far from home—we can examine the association between political attitudes and reported political behavior using data from the AsiaBarometer social survey.

The AsiaBarometer survey asks respondents about their trust in various government officials—central government, local government, courts, armed forces, and police—just as we asked the students in our sample. Based on this, we construct an index of trust in government officials, analogous to our analysis above. We then examine the association between reported levels of trust in government officials and reported political actions among respondents with at least 12 years of schooling. Levels of trust are now our explanatory variable of interest, rather than an outcome, and we examine whether reported levels of trust are significantly associated with reported political activities. Specifically, the AsiaBarometer survey asks respondents in China whether they have attended a demonstration or protest march at least once during the past three years, and whether they have refused to pay taxes or fees to the government during the same time period.

Our regressions indicate that increasing the summary trust index by one standard deviation makes an individual in the AsiaBarometer survey 13.5 percentage points less likely to attend a demonstration, and 5 percentage points less likely to refuse to pay taxes or fees.<sup>39</sup> The effect of

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<sup>37</sup>See Gentzkow and Shapiro (2004) for a discussion of the influence of media and education on ideology.

<sup>38</sup>The results can be found in Appendix F, Table A.4.

<sup>39</sup>The full set of results can be found in Appendix F, Table A.5.

the new curriculum in our sample, as estimated in Table 3, column 7, is to increase the summary trust index by around one quarter of a standard deviation. Under the assumption that the relationship between an individual's trust in officials and their political action is similar for students in our survey to that for the broader set of educated individuals in the AsiaBarometer sample, we estimate that the new curriculum made students around 3 percentage points less likely to attend a demonstration, and around 1 percentage point less likely to refuse to pay taxes and fees.

### 5.3 External validity

As with any study that relies on quasi-experimental variation, our estimated effects are “local” to our particular context. We believe this context is of special interest: not only do we study a naturally-occurring policy change, but we also study a group of students whose views are most likely to shape Chinese political discourse—China's educated elite. In addition, we study the impact of a change in educational content during students' critical years (Krosnick and Alwin, 1989; Giuliano and Spilimbergo, 2013), with a lag of several years. This is of some interest—beliefs shaped by the curriculum would need to be persistent in order to be observed in our survey, and beliefs formed in students' late teens and early twenties may be most likely to persist into adulthood.

Of course, one should use caution when generalizing from our results to the effect of the curriculum change on other Chinese students exposed to it. Peking University students uniformly excelled in their high school studies, and so are more likely than other students to have *learned* the material in the high school curriculum. This might lead our estimated effects to be larger than for other samples of Chinese high school graduates (let alone for non-graduates). However, it is worth emphasizing, as discussed above, that our survey questions did not look like exam questions, but rather gauged students' opinions. Moreover, there is good reason to think that our estimates may actually be *lower* bounds of the curriculum change's effects on other Chinese students: students who choose to enter Peking University are seen as China's most liberal, and critical of government, so are likely to be less easily persuaded by the content of their high school textbooks than are other students.<sup>40</sup>

## 6 Conclusion

The Chinese government laid out a set of ambitious goals for curriculum reform in the early 2000s: the government wanted to shape students' views on the legitimacy of the Chinese government's institutions; political participation and democracy in China; and, the role of the state in the economy. In all of these aims, we find evidence that the new curriculum introduced by the government successfully changed students' views of fundamental aspects of the society in which they

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<sup>40</sup>An *Atlantic* article posted on the Peking University website (quoted above) makes this point very explicitly ([http://english.pku.edu.cn/News\\_Events/News/Outlook/10590.htm](http://english.pku.edu.cn/News_Events/News/Outlook/10590.htm)).

lived. The magnitudes of the effects were both statistically significant and quite large: persuasion rates for a variety of important political and economic issues are estimated to be larger than those estimated in other settings, from other sources of information, such as television. The government also indicated a desire to shape students' identities, uniting the Han majority and minorities within a traditional Chinese ethnic spirit. We do not find statistically compelling evidence that the government was successful in this aim, though in general attitudes moved in the direction the government desired. The new curriculum also did not succeed in making students more environmentally conscious, perhaps because of a perceived policy tradeoff between priorities of economic development and environmental protection. These results are robust to a variety of specification checks and corrections for testing multiple hypotheses, and are striking compared to distributions of "placebo" treatment effects.

Our findings provide support for three broad theories of the roles played by school curricula in shaping political attitudes. First, and most broadly, they suggest that the state can effectively indoctrinate students. Chinese students who studied under the new curriculum trusted a broad range of government officials more; viewed Chinese political institutions as more democratic; and, were more skeptical of free markets. These are precisely the sorts of outcomes that scholars suspicious of elite control of educational institutions would fear (for example, Freire, 1970; Bowles and Gintis, 1976; Lott, Jr., 1999).

But there is also a brighter side to our findings: scholars who have argued that education can be crucial to the development of a functional democracy (e.g., Dewey, 1916; Lipset, 1959; Glaeser et al., 2007) also find support in our results, which suggest that educational content can shape students' views of political institutions. Finally, our results provide weaker support a range of historical work arguing that education can play a crucial role in forming national identities (Weber, 1976; Gradstein and Justman, 2002; Gradstein and Justman, 2005; Clots-Figueras and Masella, 2013; Alesina and Reich, 2013): the new curriculum strengthened minority students' views of themselves as "Chinese" (though not always statistically significantly so).

While we find causal effects of school curricula on students' ideology, the social welfare consequences of these effects depend on the political economy of curriculum choice: to the extent that educational content is selected to shape ideology, rather than to produce human capital, there can be a significant cost of using the education system to indoctrinate—certainly to students being educated, and perhaps to elites as well, if they benefit from more productive workers. On the other hand, the beliefs shaped by the schooling system might be extremely beneficial, as they may reduce social friction, improve coordination in a variety of settings, and establish socially-valuable norms. Of course, the norms instilled in school may be disproportionately beneficial to the seated elite, who have the ability to shape what is taught.

These results thus suggest an analysis of the political economy nexus when thinking about the government's incentives to provide education. Cantoni and Yuchtman (2013) examine elites' choices of whether to introduce particular educational content in important historical settings,

but political choices are made regarding educational content around the world shaping political outcomes as well as human capital accumulation. We believe that the choices that elites make regarding educational content deserve further study.

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## Figures and Tables

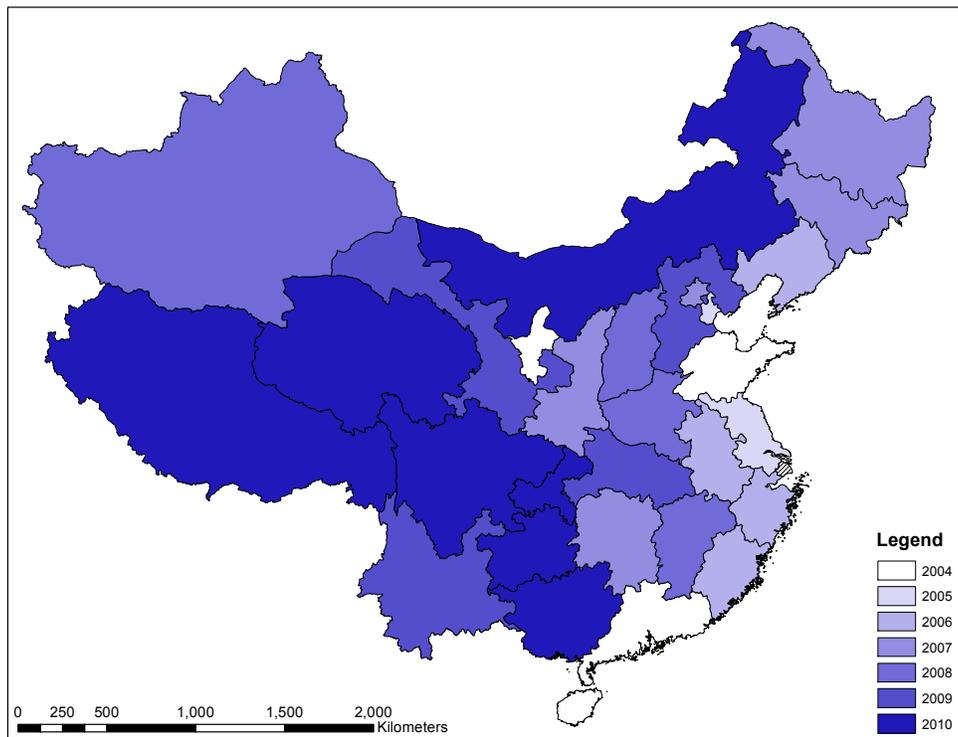


Figure 1: Years of introduction of the new curriculum textbooks.

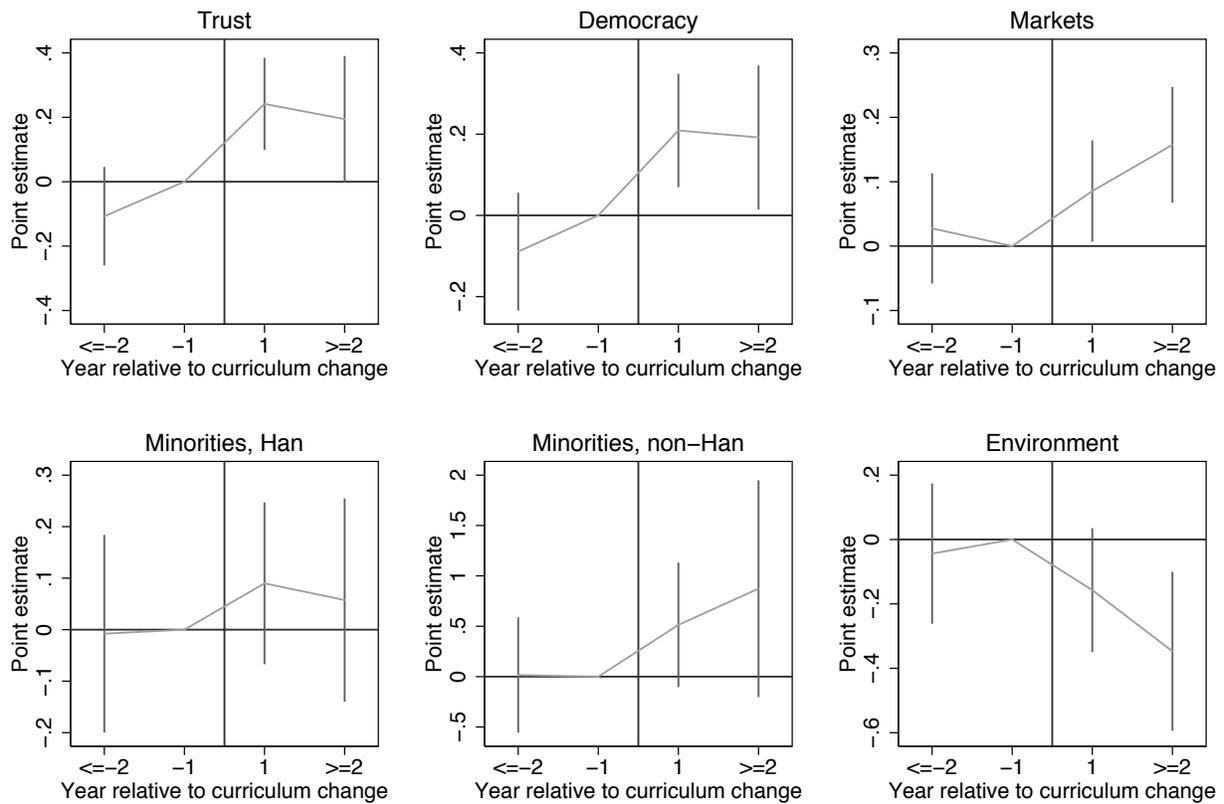


Figure 2: Estimated effects of the new curriculum by students' cohort relative to the introduction of the new curriculum. Each figure shows coefficient estimates and 95% confidence intervals from regressions of each outcome category's z-score on province and cohort fixed effects, as well as a set of dummy variables indicating the timing of the student's entry to high school relative to the introduction of the new curriculum. The " $\le -2$ " category entered two years or more before the first cohort exposed to the new curriculum; the "-1" category was the final high school cohort under the old curriculum (and this is the omitted category); the "1" category is the first cohort in a province that studied under the new curriculum; and, the " $\ge 2$ " category includes students who were either the second cohort under the new curriculum or beyond.

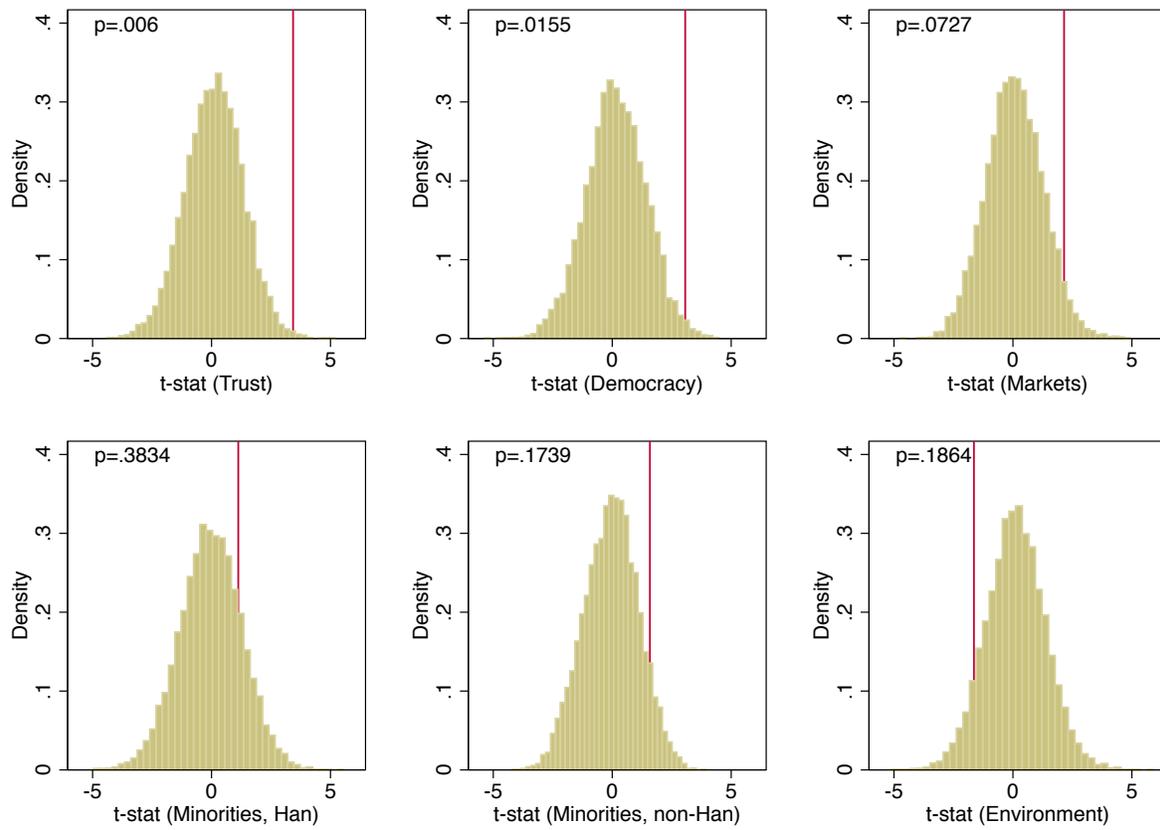


Figure 3: Distribution of t-statistics resulting from 10,000 random assignments of provinces to treatment status (see text for details).

Table 1: Timeline – China’s 8th Textbook Reform

Date of introduction	Provinces
2004 (class of 2007):	Shandong, Ningxia, Hainan, Guangdong
2005 (class of 2008):	Jiangsu
2006 (class of 2009):	Anhui, Tianjin, Zhejiang, Fujian, Liaoning
2007 (class of 2010):	Beijing, Hunan, Heilongjiang, Jilin, Shaanxi
2008 (class of 2011):	Henan, Xinjiang, Jiangxi, Shanxi
2009 (class of 2012):	Hubei, Yunnan, Inner Mongolia, Hebei
2010 (class of 2013):	Guangxi, Sichuan, Guizhou, Qinghai, Tibet, Gansu, Chongqing

Table 2: Summary statistics

Variable	All		Old Curr.	New Curr.	Unconditional		Conditional	
	Mean	Std.Dev.	Mean	Mean	Diff.	p-value	Diff.	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age	20.5	1.4	21.1	20.1	-1.0	0.000	-0.1	0.228
Height	169.6	8.2	169.3	169.8	0.5	0.172	0.1	0.949
Female	0.459	0.498	0.441	0.467	0.026	0.277	-0.030	0.523
# of siblings	0.402	0.812	0.473	0.369	-0.105	0.008	-0.022	0.727
Urban	0.782	0.413	0.772	0.787	0.015	0.453	0.022	0.533
Father high edu.	0.787	0.410	0.779	0.790	0.012	0.561	0.041	0.195
Mother high edu.	0.727	0.446	0.696	0.741	0.045	0.040	0.048	0.155
Parents in CCP	0.543	0.498	0.544	0.542	-0.002	0.931	0.000	0.996
Han	0.916	0.277	0.901	0.923	0.021	0.113	0.006	0.791
HS science track	0.697	0.460	0.691	0.700	0.009	0.718	0.011	0.768
HS humanities track	0.308	0.462	0.314	0.304	-0.010	0.680	-0.020	0.583
New curriculum	0.683	0.465	0	1	1	—	—	—

Columns 5 and 6 report raw (unconditional) differences in means across curricula, and the p-value for a t-test of differences in means. Columns 7 and 8 report differences conditional on cohort and province fixed effects; p-values calculated based on standard errors clustered at the province $\times$ cohort level (116 clusters). “Father high edu.” and “Mother high edu.” are dummy variables equal to 1 if fathers or mothers, respectively, completed high school or above. Number of observations: 1954 (619 old curriculum, 1335 new curriculum).

Table 3: Trust in government institutions

Dependent variable:	Placebo									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
New Curriculum	0.127 [0.054]	0.126 [0.075]	0.229 [0.069]	0.078 [0.055]	0.172 [0.064]	0.122 [0.070]	0.095 [0.061]	0.147 [0.053]	0.253 [0.074]	-0.001 [0.093]
p-value	(0.022)	(0.093)	(0.001)	(0.154)	(0.009)	(0.085)	(0.125)	(0.006)	(0.001)	(0.992)
FDR adjusted p-value	(0.029)	(0.066)	(0.009)	(0.084)	(0.022)	(0.067)	(0.077)	(0.022)	.	.
bootstrapped p-value	(0.092)	(0.228)	(0.024)	(0.306)	(0.028)	(0.264)	(0.180)	(0.044)	(0.022)	( $\approx 1$ )
Observations	1,767	1,766	1,766	1,767	1,766	1,767	1,753	1,755	1,753	1,767
Mean DV	3.981	3.619	3.169	3.630	3.816	3.486	3.112	3.457	0	0
Std.Dev. DV	0.748	0.770	0.819	0.755	0.838	0.799	0.875	0.900	1	1
Persuasion rate (uncond.)	0.520	0.228	0.683	0.145	0.241	0.107	0.114	0.384	.	.
Persuasion rate (cond.)	0.384	0.197	0.466	0.132	0.207	0.099	0.106	0.304	.	.

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level (116 clusters). The z-score indices in columns 9 and 10 (weighting by the inverse covariance of the standardized outcomes) and the FDR adjusted p-values are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008). Persuasion rates are based on the binary analogue of the dependent variable (a dummy taking the value 1 for outcomes above the median value).

Table 4: Democracy and political participation

Dependent variable:	People influence VH in reality	Chinese democracy in reality	People's participation characteristic of democracy	z-score index (Democracy)
	(1)	(2)	(3)	(4)
New Curriculum	0.199	0.246	0.048	0.220
	[0.078]	[0.122]	[0.034]	[0.072]
p-value	(0.012)	(0.047)	(0.155)	(0.003)
FDR adjusted p-value	(0.038)	(0.050)	(0.076)	.
bootstrapped p-value	(0.034)	(0.086)	(0.258)	(0.030)
Observations	1753	1724	1724	1724
Mean DV	3.202	5.180	0.392	0
Std.Dev. DV	0.976	1.686	0.488	1
Persuasion rate (uncond.)	0.345	0.199	0.012	.
Persuasion rate (cond.)	0.279	0.175	0.012	.

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level (116 clusters). The z-score index in column 4 (weighting by the inverse covariance of the standardized outcomes) and the FDR adjusted p-values are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008). The persuasion rates computed for columns 1 and 2 are based on the binary analogue of the dependent variable (a dummy taking the value 1 for outcomes above the median value).

Table 5: Markets

Dependent variable:	Skeptical of market economy
	(1)
New Curriculum	0.087 [0.041]
p-value	(0.034)
bootstrapped p-value	(0.074)
Observations	1,625
Mean DV	0.698
Std.Dev. DV	0.459
Persuasion rate (uncond.)	0.288
Persuasion rate (cond.)	0.240

Regression includes a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level (116 clusters). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table 6: Minorities

Dependent variable:	Views from Han Chinese					Views from minorities				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Minorities same as Han Chinese	Minorities share heritage with Han	Willing to marry other ethnic group	z-score index (Minorities, Han)	Minorities same as Han Chinese	Minorities share heritage with Han	Willing to marry other ethnic group	Feel Chinese	z-score index (Minorities, non-Han)
New Curriculum	-0.090 [0.055]	0.058 [0.042]	0.007 [0.031]	0.064 [0.028]	0.089 [0.079]	0.064 [0.106]	-0.010 [0.146]	-0.046 [0.065]	0.554 [0.267]	0.493 [0.311]
p-value	(0.107)	(0.172)	(0.816)	(0.022)	(0.263)	(0.549)	(0.945)	(0.484)	(0.042)	(0.118)
FDR adjusted p-value	(0.192)	(0.208)	(0.298)	(0.097)	.	(1.000)	(1.000)	(1.000)	(0.202)	.
bootstrapped p-value	(0.282)	(0.316)	(0.772)	(0.064)	(0.394)	(0.674)	(0.920)	(0.470)	(0.114)	(0.162)
Observations	1,654	1,654	1,654	1,654	1,654	149	149	149	141	141
Mean DV	3.553	0.780	0.177	0.840	0	0.826	0.262	0.926	3.546	0
Std.Dev. DV	0.737	0.414	0.382	0.367	1	0.381	0.441	0.262	0.760	1
Persuasion rate (uncond.)	n/a	0.268	0.009	0.405	.	0.366	n/a	n/a	0.339	.
Persuasion rate (cond.)	n/a	0.226	0.009	0.317	.	0.298	n/a	n/a	0.280	.

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level (115 clusters in columns 1–5 and 64 clusters in columns 6–10). The z-score indices in columns 5 and 10 (weighting by the inverse covariance of the standardized outcomes) and the FDR adjusted p-values are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008). The persuasion rate computed for column 9 is based on the binary analogue of the dependent variable (a dummy taking the value 1 for outcomes above the median value). No persuasion rates are shown where the point estimates indicate an effect opposite to the one intended by the curriculum reform.

Table 7: Environment

Dependent variable:	Willing to pay to protect environment	Environment primary goal	Environment over economic growth	z-score index (Environment)
	(1)	(2)	(3)	(4)
New Curriculum	-0.033 [0.021]	-0.034 [0.028]	-0.034 [0.044]	-0.162 [0.099]
p-value	(0.108)	(0.219)	(0.446)	(0.104)
FDR adjusted p-value	(0.480)	(0.480)	(0.480)	.
bootstrapped p-value	(0.182)	(0.322)	(0.448)	(0.166)
Observations	1,791	1,708	1,708	1,708
Mean DV	0.933	0.113	0.694	1
Std.Dev. DV	0.250	0.317	0.461	1

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level (116 clusters). The z-score index in column 4 (weighting by the inverse covariance of the standardized outcomes) and the FDR adjusted p-values are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008). No persuasion rates are shown because the point estimates indicate effects opposite to those intended by the curriculum reform.

Table 8: Follow up survey results

Dependent variable:	z-score index (Trust in gov.)	z-score index (Democracy)	Skeptical of market economy	z-score index (Minorities, from Han Chinese)	z-score index (Environment)
	(1)	(2)	(3)	(4)	(5)
New Curriculum	0.131 [0.263]	0.111 [0.233]	0.085 [0.106]	0.565 [0.213]	-0.149 [0.255]
p-value	(0.620)	(0.634)	(0.426)	(0.010)	(0.561)
bootstrapped p-value	(0.748)	(0.724)	(0.530)	(0.066)	(0.662)
Observations	331	303	303	299	330
Mean DV	0	0	0.707	0	0
Std.Dev. DV	1	1	0.456	1	1

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level (116 clusters). The z-score indices (weighting by the inverse covariance of the standardized outcomes) are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table 9: Robustness

Dependent variable:	z-score index (Trust in gov.)	z-score index (Democracy)	Skeptical of market economy	z-score index (Minorities, Han)	z-score index (Minorities, non-Han)	z-score index (Environment)
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: Baseline</i>						
New Curriculum	0.253 [0.074]	0.220 [0.072]	0.087 [0.041]	0.089 [0.079]	0.493 [0.311]	-0.162 [0.099]
p-value	(0.001)	(0.003)	(0.034)	(0.263)	(0.118)	(0.104)
bootstrapped p-value	(0.022)	(0.030)	(0.074)	(0.394)	(0.162)	(0.166)
<i>Panel B: With individual-level controls</i>						
New Curriculum	0.321 [0.078]	0.272 [0.075]	0.051 [0.044]	0.125 [0.094]	0.450 [0.287]	-0.057 [0.098]
p-value	(0.000)	(0.000)	(0.255)	(0.185)	(0.122)	(0.562)
bootstrapped p-value	(0.008)	(0.018)	(0.338)	(0.340)	(0.132)	(0.676)
<i>Panel C: With province <math>\times</math> cohort-level controls</i>						
New Curriculum	0.255 [0.073]	0.224 [0.070]	0.085 [0.039]	0.087 [0.079]	0.518 [0.328]	-0.160 [0.098]
p-value	(0.001)	(0.002)	(0.031)	(0.275)	(0.119)	(0.106)
bootstrapped p-value	(0.020)	(0.032)	(0.076)	(0.414)	(0.166)	(0.160)
<i>Panel D: Province-specific cohort trends</i>						
New Curriculum	0.148 [0.077]	0.166 [0.072]	0.090 [0.050]	0.049 [0.091]	0.416 [0.473]	-0.114 [0.115]
p-value	(0.056)	(0.023)	(0.077)	(0.590)	(0.383)	(0.321)
bootstrapped p-value	(0.370)	(0.126)	(0.220)	(0.684)	(0.412)	(0.522)
Observations	1,753	1,724	1,625	1,654	141	1,708
Mean DV	0	0	0.698	0	0	0
Std.Dev. DV	1	1	0.459	1	1	1

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level (116 clusters). The z-score indices (weighting by the inverse covariance of the standardized outcomes) are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table 10: Short Panel

Dependent variable:	z-score index (Trust in gov.)	z-score index (Democracy)	Skeptical of market economy	z-score index (Minorities, Han)	z-score index (Minorities, non-Han)	z-score index (Environment)
	(1)	(2)	(3)	(4)	(5)	(6)
New Curriculum	0.291	0.236	0.069	0.102	0.149	-0.009
	[0.066]	[0.054]	[0.034]	[0.075]	[0.246]	[0.081]
p-value	(0.000)	(0.000)	(0.056)	(0.188)	(0.552)	(0.910)
bootstrapped p-value	(0.034)	(0.004)	(0.206)	(0.396)	(0.508)	(0.940)
Observations	447	440	414	415	40	430
Mean DV	0	0	0.698	0	0	0
Std.Dev. DV	1	1	0.459	1	1	1

Regressions estimated using the final cohort studying the old curriculum and the (adjacent) first cohort studying the new curriculum, for provinces with variation in curriculum in our sample. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level (26 clusters for columns 1–4 and 6; 18 clusters for column 5). The z-score indices (weighting by the inverse covariance of the standardized outcomes) are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table 11: Teaching style

Dependent variable:	z-score index (Teaching style)	Teaching focused on <i>gaokao</i>
	(1)	(2)
New Curriculum	-0.007 [0.083]	-0.108 [0.069]
p-value	(0.931)	(0.122)
bootstrapped p-value	( $\approx 1$ )	(0.262)
Observations	1,691	1,691
Mean DV	0.000	4.043
Std.Dev. DV	0.694	0.882

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level (116 clusters). The z-score index (weighting by the inverse covariance of the standardized outcomes) in column 1 is computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

## Appendix A The Chinese high school curriculum

All students in the first year of senior high school take the same courses in languages (Chinese and English), math, science, and social studies (Politics, History, and Geography). Students then choose to specialize in either the science track or the humanities track. The choice of track determines both students' coursework in the last two years of senior high school, and the content on which they will be tested in the high-stakes National Higher Education Entrance Examination, known as the *gaokao* (as seen in Figure A.1). In our empirical analysis below, we focus on changes to the tenth grade Politics textbooks for senior high school students, before the track split. Importantly, all students face a high-stakes test on the Politics curriculum: students in the science track are examined on the content of the first year Politics textbook in the so-called "little *gaokao*" during eleventh grade, while students in the humanities track are examined on this material in the *gaokao* exam at the end of senior high school; both exams factor into a student's college admissions prospects.

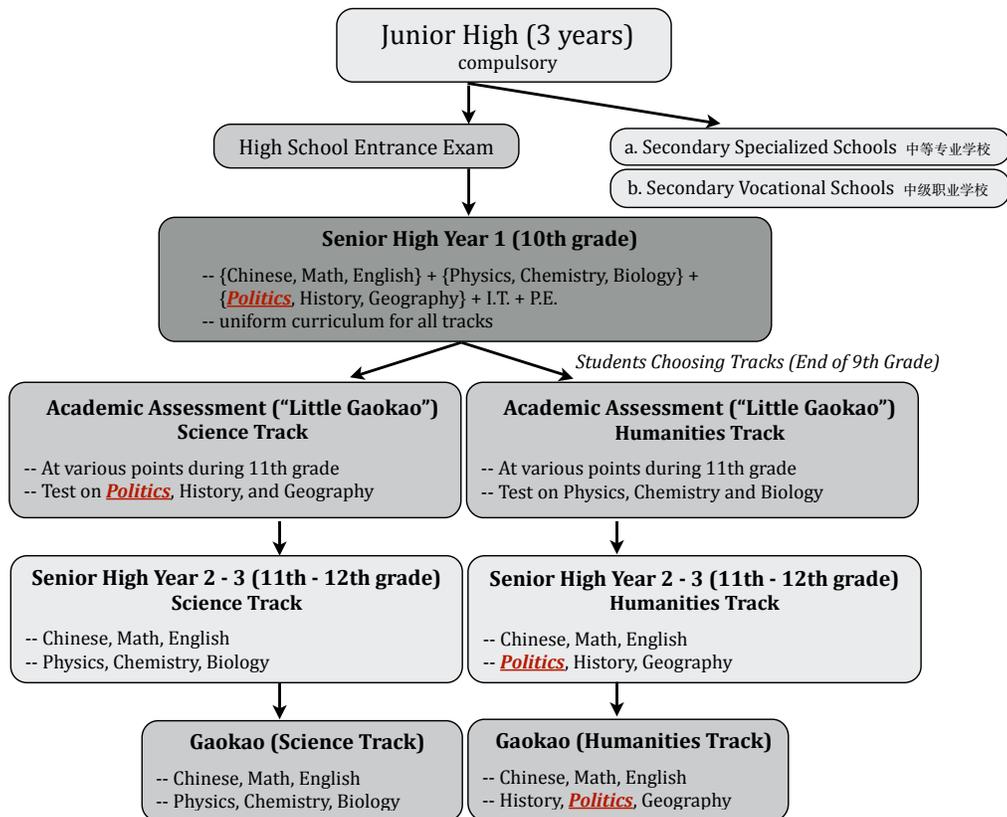


Figure A.1: The Chinese secondary education system

## Appendix B Government Documents

### B.1 Summary of government documents consulted

#### 1. “Decision on Deepening the Education Reform, and Comprehensively Promoting the ‘Quality-oriented Education’”<sup>1</sup>

Issued by the State Council of the People’s Republic of China, in June 1999. This document marks the beginning of the planning phase of the 8th Curriculum Reform. It emphasizes that education is essential to China’s continuous growth during 21st century, and that its education policy needs substantial reform. In particular, the document calls for a reform of the curriculum structure and content.

#### 2. “Framework for Basic Education Reform”<sup>2</sup>

Issued by the Ministry of Education of the People’s Republic of China, in June 2001. In this document, the Ministry delineates the motivation and objectives for the coming curriculum reform. This document also specifies that the corresponding “curriculum framework” would be set up to support the implementation of these new educational objectives.

#### 3. “Strengthening the Ideological and Moral Construction of the Youth”<sup>3</sup>

Issued by the State Council of the People’s Republic of China, in February 2004. The memo specifies the particular political and moral education objectives that should be achieved through the high school “Politics” curriculum. Note that while the Ministry of Education’s “curriculum framework” guided writing of the high school textbooks for all subjects, the “Politics” subject is unique in the sense that it is guided by this additional memo issued by the State Council.

#### 4. “Curriculum Framework for the Senior High School Politics Subject”<sup>4</sup>

Issued by the Ministry of Education of the People’s Republic of China, in March 2004. This document describes the specific goals of the curriculum, as well as the key items that the curriculum would cover. The document serves as the guiding framework for textbook authors, high school teachers, exam preparation book publishers, as well as students.

### B.2 Translated excerpts of relevant government documents

#### 1. State Council’s “Decision on Deepening the Education Reform, and Comprehensively Promoting the ‘Quality-oriented Education’” (1999)

Education is at the fundamental position of a nation’s power accumulation process. Whether a nation is powerful or not increasingly depends on its labor force’s human capital – the number and quality of various types of labor forces. This poses a more urgent demand for China to

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<sup>1</sup>The original document can be found at [http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe\\_177/200407/2478.html](http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_177/200407/2478.html).

<sup>2</sup>The original document can be found at [http://www.gov.cn/gongbao/content/2002/content\\_61386.htm](http://www.gov.cn/gongbao/content/2002/content_61386.htm).

<sup>3</sup>The original document can be found at <http://www.people.com.cn/GB/jiaoyu/1053/2405224.html>.

<sup>4</sup>The original document can be found at [http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe\\_711/201001/78375.html](http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_711/201001/78375.html).

grow and train a new generation suitable for the 21st century. ... During the 50 years since the founding of the PRC, especially since the "Reform and Opening-up" in 1978, China's education reform and development have witnessed outstanding achievements. However, in this new era, due to various reasons, we are falling behind in terms of our education philosophy, education system and institutions, students' training models, education content, and education methods. This negatively affects the overall development of youths, and is not suitable for the needs of enhancing our citizens' characters and qualities.

## **2. Ministry of Education's "Framework for Basic Education Reform" (2001)**

In this document, the ministry delineates the motivation and the objectives for the future curricular reforms. *The previous basic educational curriculum, it is said, cannot satisfy the needs of development in this new age.* Thus, a new curriculum should meet the following objectives (in the order of appearance in the original document): it should *reflect the times, and make students patriotic, communitarian, [and] love socialism.* Students should *inherit and carry forward the great traditions of the Chinese nation and its revolution;* and be equipped with *an awareness of the legal system under a socialist democracy.* The new curriculum should *promote compliance with national laws and with societal ethics, and gradually form in students a correct worldview, a correct view of life, and a correct value system.*

A "National Curriculum Framework" was set up in order to support the implementation of the new educational objectives. The June, 2001, document describes the Framework as *the guideline for the drafting of textbooks, for the development of learning activities, and for assessment and examinations.* It is *the basis for centralized curriculum management and evaluation.* Some of the objectives of the education reforms are reaffirmed when describing the Framework; the document indicates that

the development of the curriculum framework should, according to the specific content of each subject area, strengthen ideological education with respect to its relevance, effectiveness, and ability to motivate; it should educate students in patriotism, communitarianism, and socialism; it should increase education in the great traditions of the Chinese nation; it should increase revolutionary and national defense education; it should strengthen thought quality and moral education; it should guide students to establish a correct worldview, a correct view on life, and a correct value system; it should advocate a scientific spirit and attitude, and the scientific method, guiding students toward innovation and practice.

## **3. State Council's memo of "Strengthening the Ideological and Moral Construction of the Youth" (2004)**

The main tasks and goals of the ideological and moral construction of our youths are:

1. Beginning with strengthening the love of country, promote and foster patriotism as the core of our great national character. Thoroughly carry out the education of the fine traditions of the Chinese nation, the Chinese revolutionary traditions, and Chinese history, especially modern history. Guide the vast numbers of youths to recognize the history and traditions of the Chinese nation and to understand the grave national disasters and the heroic struggles of the Chinese people in modern times. Establish from a young age a sense of national self-esteem, confidence and pride.
2. Beginning with the setting of broad aspirations for the youths, foster and cultivate in them correct ideals and beliefs. Carry out education on the history of China's revolution, nation building, and "The Reform and Opening-up." Guide the vast numbers of youths

to correctly recognize the patterns of social development, to correctly recognize the nation's future and destiny; integrating individual growth with the great cause of socialism with Chinese characteristics, and with the prosperity and power of the homeland. Prepare the youths for taking on the honorable mission of building China and revitalizing China.

3. Beginning with the regulation of youths' behavior and habits, develop in them good moral character and civil conduct. Intensely promote basic codes of ethics: "patriotism and respect for the law; civility and honesty; unity and friendship; diligence, frugality and self-reliance; and professional dedication." Promote communitarianism and socialist humanitarianism. Guide the vast numbers of youths to firmly establish a place in their heart for the homeland, for the community, and for other people; to understand the basic principles of conduct; and to be equipped with the basic upbringing necessary for living a civilized life. Teach the youths how to handle interpersonal relationships, the relationship between the individual and society, and the relationship between the individual and the natural world.
4. Beginning with improvements in the development of character, promote the overall development of young people. Strive to cultivate in youths a work ethic, creativity, efficiency, and environmental awareness; an enterprising spirit, a scientific mind, and an awareness of democracy and the rule of law. Enhance the development of young people's practical skills, autonomy, and the ability to protect themselves; guide them so that they maintain their vitality, their exuberance, their high-spirited yearning for self-betterment; encourage them to study diligently, to implement boldly, and to dare to create; comprehensively improve their ideological and moral character, their scientific and cultural literacy, and their physical health.

School is the primary channel for transmitting ideological and moral education to young people. We must follow the party's education policy, and prioritize ideological and moral education among all general education goals, and throughout all aspects of education and teaching activities. We should place extremely high importance on the cultivation of a national spirit, incorporating this throughout the primary and secondary education experience.

#### **4. Ministry of Education's "Curriculum Framework for Senior High School Politics Subject" (2004)**

The goals of the Politics subject:

1. Knowledge:
  - Know that the Chinese Communist Party has always represented the development trend of China's advanced productive forces, the orientation of China's advanced culture, and the fundamental interests of the overwhelming majority of the Chinese people.
  - Understand the meaning of developing socialist market economy, the socialist democracy, and the socialist advanced culture.
  - Know the principles and the basic methodology of materialism and historical materialism.
  - Understand contemporary China's basic needs for moral construction among its citizens, as well as the establishment of China's rule of law.
  - Obtain the relevant knowledge in order to make the correct decisions regarding career development.
2. Abilities:

- Enhance the ability to use Marxist principles and methodology to solve real issues. Be able to make the correct value judgment and behavior choices.
- Enhance the ability to actively participate in economic, political, and cultural activities.
- Enhance the ability to correctly handle the relationship between competition and cooperation in the society.
- Foster the ability to individually and voluntarily study, choose, and discover.
- Enhance the ability to do everything in accordance to the law: constrain self conducts according to the law, and use law to protect own rights and interests.
- Develop the ability to collect and filter societal information using multiple methods, especially the modern information technology.

### 3. Sentiments, Attitudes, and Values:

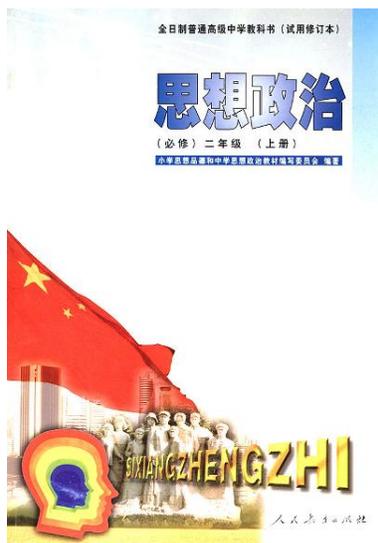
- Love the Chinese Communist Party. Be persistent in the belief in the socialist development path with Chinese characteristics.
- Love the nation, love its people. Pay close attention to the destiny of the nation. Enhance the self-esteem, self-confidence, and pride of the Chinese nation. Be willing to promote the Chinese ethnic spirit. Establish the ambition to strive for the revival of the Chinese nation.
- Pay close attention to social development. Take initiative in participating in social activities. Be honest, faithful, and trustworthy. Enhance social responsibilities. Continue to establish perspectives and concepts of democracy and the rule of law. Foster the idea of citizenship.
- Love the community. Be devoted to the society. Care for others, and be willing to help others. Foster the spirits of cooperation and friendliness.
- Love to study. Respect science. Chase after truth. Obtain the scientific attitudes and innovation spirits.
- Love life. Take initiative to engage in healthy cultural activities. Maintain an upbeat spirit, and aim for higher moral goals.
- Love peace. Respect for the diverse ethnic culture around the globe. Pay close attention to the common interests of all mankind. Foster a global perspective.

## Appendix C Textbooks

### C.1 Textbook Covers

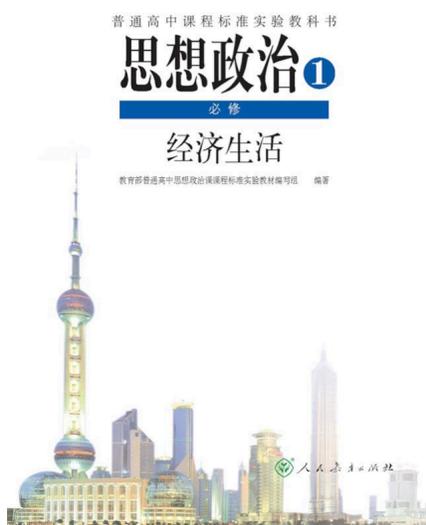
#### 1. Old politics textbook

“Senior High School Politics (Module A)”, *People’s Education Press*.



#### 2. New politics textbook

“Senior High School New Curriculum Standard Politics (Module 1): Economic Life”, *People’s Education Press*.



## C.2 A Few Words on the New Senior High School Politics Textbook, from the Textbook Author (2009)

In July 2009, the chair of the committee in charge of rewriting the Politics textbook, Tian Xinming, who was appointed by the Ministry of Education, published an essay on his thoughts on the new textbook.<sup>5</sup> To our knowledge, this is the only example of the author of a Chinese textbook reflecting on how he wrote the textbook. The following are translated excerpts:

The new textbook features two prominent characteristics: First, it unequivocally upholds the correct political and ideological point of view, as well as Marxist education. Second, it reflects the basic concepts of the curriculum reform, focusing on guiding the learning process.

...

We believe that high school students are at an age of rapid development and transformation of their own political ideology. Since the founding of the [People's Republic of China], many years of experience has shown that the high school Politics curriculum may have a profound impact on the students' entire lives. The Politics textbook is the spiritual material that the country provides for the students. Writing the Politics textbook is an act at the state level, rather than an academic activity of the individual author. Although the high school Politics textbook teaches very basic knowledge, it possesses extremely strong political, policy-oriented, and scientific characteristics. With a large readership, it will influence an entire generation of young people.

...

The Education Ministry has explicitly indicated to us that the fundamental goal for the Politics curriculum is to educate students in morality and ideology. Similar to other subjects, it also teaches students knowledge and equips students with skills. However, its fundamental characteristic is that it is a curriculum designed for moral and ideological education. This is the major difference between the Politics curriculum and other subjects. Whether it is writing the textbook or teaching the material at school, we must tightly uphold this curriculum's basic feature and fundamental goal. Otherwise, we will go in the wrong direction.

...

[Regarding new material that needed to be covered in the textbook.] The CCP's basic guiding principles, which are explicitly summarized and stated in the Party's 15th congress: namely, the basic goals and policies of the construction of the Socialist economy, politics, and culture with Chinese characteristics. This is the expansion of the CCP's basic roadmap, and the curriculum needs to accurately reflect this. After the Party's 16th congress, the CCP introduced the strategic ideology of a harmonious society. These ideas must also be promptly reflected in the new curriculum, and become a part of the moral and ideological educational content.

...

In order to write the textbook well, we must maintain a correct and clear understanding of the current ideological and political situation. The overall situation of China's ideological theory field is good. The mainstream is positive and healthy. However, the ideological field is not peaceful. There exist noises: ideological struggles and competition; foreign hostile forces' attempts to westernize or separate China. This would be reflected in the textbook writing process.

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<sup>5</sup>The original text in its entirety can be found at [http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830\\_824446.htm](http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm).

## Appendix D Government's Aims, Changes in the Curriculum, and Changes in the *Gaokao* framework

### D.1 Rule of law, supervision of government, and trust in government

- State Council (1999): mentions “the rule of law” as main goals of moral education at school.
- Ministry of Education (2001): the new curriculum should make students understand the principle of “the rule of law.”
- State Council (2004): emphasizes that “the rule of law” should be integrated into the school curriculum.
- Ministry of Education (2004): one of the main objectives of the curriculum is to make students understand the “basic requirement of legal system construction in contemporary China.” Also, the new curriculum shall establish students’ sentiment of “loving CCP and the nation.” The framework adds several sections related to the rule of law. For example, “government should exercise its power and duties according to law,” “government’s power shall be supervised, and government should not abuse its power.” The framework also adds sections related to supervision of the government, such as “citizens’ responsibility to participate in government supervision,” “government’s power shall be supervised, and government should not abuse its power.”
- Added sections in the new curriculum:
  - “Various methods of democratic supervision”
  - “Responsible exercise of the supervision right”
  - “A government that benefits its people”
  - “Ways to seek help; legal channels to voice complaints”
  - “The specific requirements for government to adhere to the rule of law”
  - “The significance of restricting and supervising government’s power”
  - “Cheers for the ‘Sunshine Project’ (local government operational transparency project)”
  - “End-of-chapter research topic: where does the government’s authority come from?”
- Added items in the new *Gaokao* framework:
  - Chinese citizens’ rights of democratic supervision
  - The legal channels to conduct democratic supervision
  - Citizens need to exercise the right of democratic supervision in a responsible manner
  - The duties of the Chinese government
  - The fundamental guidelines of the Chinese government; the basic principles of government operations
  - The significance and requirement of the rule of law
  - To improve the government’s ability to adhere to the rule of law
  - The significance of restricting and supervising government’s power
  - China’s administrative supervision system
  - The origin and establishment of the Chinese government’s authority

## D.2 Democracy and political participation

- State Council (1999): mentions “(socialist) democracy” as a goal of moral education at school.
- Ministry of Education (2001): Specifies that to equip students with the ideas of “socialist democracy” is one of the main objectives of the new curriculum.
- State Council (2004): To establish the consciousness of “(socialist) democracy” is one of the main objectives of moral construction.
- Ministry of Education (2004): a main goal of the curriculum is to make students understand the meaning of “socialist democracy.” Also, the curriculum is to “enhance students’ ability to actively participate in political life.” The framework also adds related sections such as “citizens’ participation in political life,” “rights and duty of political participation”, etc.
- Added sections in the new curriculum:
  - “Main components of political life”
  - “How to participate in political life”
  - “The choice of election methods and its basis”
  - “Various ways of participating in democratic decision-making”
  - “The importance of citizens’ direct participation in democratic decision-making”
  - “The most comprehensive democratic practices in China”
  - “End-of-chapter research topic: ordered and disordered political participation”
- Added items in the new *Gaokao* framework:
  - Basic principles and content of Chinese citizens participating in political life
  - Channels for Chinese citizens to participate in political life
  - China’s election system and method
  - Various ways for citizens to participate in democratic decision-making
  - The significance of citizens to directly participate in democratic decision-making
  - The meaning and significance of Chinese villages and urban dwellers to govern themselves

## D.3 State intervention in markets

- State Council (1999): not mentioned.
- Ministry of Education (2001): not mentioned.
- State Council (2004): the document states that “the moral education of the youth should correspond to the reality of the socialist market economy.”

- Ministry of Education (2004): the document specifies that one of main goals of the curriculum is to make students understand the meaning of “socialist market economy.” The framework also adds sections such as “the role government plays in market activities,” “one cannot construct socialist market economy without the state’s macro-adjustment and intervention.”
- Added and modified sections in the new curriculum:
  - “Limitations of market allocation of resources”
  - “Basic characteristics of the socialist market economy”
  - “Strengthening the state’s macroeconomic regulations and controls”
  - “Functions of fiscal policies”
  - “How to correctly utilize fiscal policies”
  - “The concept of public goods”
- Added and modified items in the new *Gaokao* framework:
  - Market adjustment and its limitations
  - Market allocation of resources
  - Basic characteristics of the socialist market economy
  - Public finance and infrastructure construction
  - Public finance and macroeconomic regulations and controls
  - Public finance and the guarantee of people’s living standard

#### **D.4 Attitudes toward ethnic minorities**

- State Council (1999): specifies that the education of “multi-ethnic harmony” is a goal of moral education at school.
- Ministry of Education (2001): the document mentions that one of the main objectives of the new curriculum is to make students become proud of their Chinese cultural heritage.
- State Council (2004): the document mentions several times the importance of educating youth regarding Chinese cultural and ethnic heritage. It also states that moral education needs to establish the sentiment of Chinese ethnic pride among the youth.
- Ministry of Education (2004): specifies Chinese ethnic pride as one of the main objectives of the new curriculum.
- Added and modified sections in the new curriculum:
  - “Principles of dealing with relationships among ethnic groups: equality, unity, and all prosperous together”
  - “The eternal Chinese ethnic spirit”
  - “Promoting the Chinese ethnic spirit”
- Added and modified items in the new *Gaokao* framework:

- The basic principles of dealing with multi-ethnic relationships in China
- The inclusiveness of the Chinese culture
- Each ethnic group contributes to the Chinese culture
- The core of the Chinese ethnic spirit
- The contemporary characteristics of the Chinese ethnic spirit

#### **D.5 Attitudes toward the environment**

- State Council (1999): not mentioned.
- Ministry of Education (2001): specifies that equipping students with “basic consciousness of the environment” is one of the objectives of the new curriculum.
- State Council (2004): one of the main goals of youths’ moral construction is to establish their “consciousness of the environment,” as well as “the basic ability to handle the relationship between men and nature.”
- Ministry of Education (2004): the document does not explicitly mention environment in its main objectives section. However, the framework adds sections on topics such as “sustainable development path” into the new curriculum.
- Added sections in the new curriculum:
  - “New demands of economic development”
  - “Scientific outlook on development”
  - “Sustainable and balanced economic development”
- Added items in the new *Gaokao* framework:
  - Scientific outlook on development
  - Sustainable and balanced economic development

## Appendix E Survey

### E.1 Recruitment Email for Peking University Online Survey (2013)

*In English:*

Dear Students,

Greetings! This is a research study about young people in China, consisting of online survey questions and some simple online economic games. It is distributed to all undergraduate students at Peking University. This survey is organized by University of California at Berkeley, Hong Kong University of Science and Technology, and Guanghua School of Management at Peking University. We welcome your participation.

Our survey aims to understand Chinese young people's opinions on political institutions, social issues, economic activities, and so on. The information we collect will only be used for academic research. There is no right or wrong answer to these questions. Your honesty and patience in answering these questions will be extremely helpful to our academic study, which will foster the creation of human knowledge.

The entire study (online survey & online economic games) will take about 30 minutes to complete. Each student can only complete one survey. With your student ID, you will be rewarded with at least RMB 40 for your participation. Depending on your responses, you can also earn up to RMB 110 in the economic games. Furthermore, you will be entered into a drawing that gives out 1 iPad with Retina Display, 5 iPad Minis, and 10 iPod Shuffles.

Please note that you have to be at least 18 years old to be able to participate in this survey.

If you are interested in participating in this study, please click on the link below:  
<link>

Peking University, Guanghua School of Management  
May 6th, 2013

*In Chinese:*

亲爱的同学:

见解独到的你, 是否对中国的政治和社会有自己的见解? 天资聪颖的你, 是否想体验一下“高智商”的经济学游戏? 现在, 我们提供了一个机会让如此优秀的你发表独到见解、并且赢取高端大气上档次的iPad 4 和iPad Mini 幸运大奖!

这是一份针对中国年轻人“社会观念和 risk 态度”的问卷调查和在线经济学小游戏, 由美国加州大学伯克利分校 (UC Berkeley)、斯坦福大学 (Stanford)、香港科技大

学 (HKUST)和北京大学光华管理学院 (PKU GSM) 联合组织。本次调查针对北京大学本科生 (年满18周岁)。我们的研究主要为了了解中国年轻人的社会观念、价值偏好和风险规避行为等, 我们搜集到的所有信息将只用于学术研究。你的回答将直接有利于学术研究, 推动人类知识的开拓。每一个北大学子的参与都对研究的结果至关重要!

整个在线调查只需花费你30分钟时间, 但报酬非常丰厚! 完成整个问卷你即可凭借学号获得至少40元, 至多110元的现金奖励! 参加此次研究, 你更有机会抽奖获得1台iPad with Retina Display, 5台iPad Mini和10台iPod Shuffle!

开始行动起来吧! 马上点击以下链接: <link>

请注意本调查只持续两周, 即2013年5月6日 (周一) 至5月19日 (周日), 过时不候哦 上个月第一轮问卷抽奖的幸运儿照片如下。好运齐分享! 邀请你的北大本科朋友一起来参加很攒人品哦!

北京大学光华管理学院  
2013年5月6日

## E.2 Detailed description of survey sections

A first set of questions is our focus in the main text of the paper:

- **Personal background.** We asked about students' backgrounds and demographic characteristics, including questions about students' parents' Communist Party membership, parents' professions and residential status (*hukou*), students' sources of news, and students' majors, among others. These variables are never examined as outcomes (though we test for balance across curricula, which functions as a sort of placebo test).
- **Attitudes toward political participation.** We asked students a range of questions related to political participation and democracy. We asked factual questions to determine whether students were aware of certain electoral institutions; we asked students for their opinions of how democratic China is; we asked about students' plans to vote; and, we asked students about their views on the defining characteristics of a democracy. These variables are considered as outcomes in our analysis of the effects of the new curriculum's sharp increase in content focused on Chinese democratic institutions.
- **Trust in government officials.** We asked students about their trust in the central, provincial, and local governments; in courts; in the armed forces; and, in the police. We also asked students whether government officials were self-serving or served the interests of the rich and powerful. These variables are all outcomes when we evaluate whether new discussions of the rule of law, citizen oversight, and constitutional sources of the government's authority resulted in greater trust in government officials.
- **General questions about trust.** We asked students about their trust in people generally; and, we asked about trust in various non-governmental institutions: NGO's, banks and the financial system, and foreign investors. These variables are "placebo" outcomes when we evaluate whether changes in trust in government officials are simply a result of greater trust across institutions or groups of people.
- **The "Three Represents".** We asked students which segments of society should play a role in shaping government policy. We use the responses as an outcome in our analysis of whether the teaching of the Three Represents broadened students' views of groups that should influence policy.
- **Views on minorities.** We asked about students' trust of minorities; we asked whether students viewed Han Chinese and minorities as sharing a common ethnic heritage; and, we asked whether students would consider marrying someone from a different ethnic group.<sup>6</sup> We also asked whether students' identities were "Chinese"—a question we examine when studying the responses of minority students. These variables are examined as outcomes when evaluating whether the new curriculum was successful in crafting a common ethnic identity among all Chinese, whether Han or minorities.

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<sup>6</sup>We had hoped to conduct an Implicit Association Test to complement direct questions about minorities, but implementing the IAT proved logistically difficult. In addition, it was theoretically unclear whether even a persuasive curriculum change should change *implicit* attitudes. Still, we hope to use other attitude elicitation mechanisms in future work.

- **Views on markets.** We asked students whether a market economy is preferable to other economic systems. This is an outcome variable we consider when evaluating whether the new curriculum's emphasis on the need for government intervention in markets affected students' views on the economic system.
- **Views on the environment.** We asked students several questions about willingness to trade-off economic growth for environmental protection. We examine these questions as outcomes potentially affected by the new curriculum's new discussion of environmental issues.
- **Teaching methods.** We asked students about several aspects of their classroom experience (e.g., encouragement of student participation or the importance of memorization); we also asked about teachers' focus on the *gaokao*. We examine these variables as outcomes to determine whether changed teaching practices were associated with the change in educational content.

A second set of questions is of interest to us, because the questions touch on important political attitudes; however, these questions are not our focus here because they are not discussed in the government documents outlining the curriculum reform, are not associated with changes in the textbooks' content, or because there is some ambiguity in the government's desired attitudes. The following sections are briefly examined in Appendix Table A.1:

- **The wisdom of the masses.** We asked students several questions regarding whether "the people" do a good job selecting leaders; whether "the people" know whether village heads are doing a good job; etc. As we discuss below, we view this issue as an ambiguous one, as the government emphasizes that political participation is important, but also that political participation is a *responsibility*.
- **Disobedience.** We asked students whether they would disobey or stand up to the government if an official does not adhere to the rule of law. Again, this is an ambiguous set of attitudes: the government certainly emphasizes officials' adherence to the rule of law, and also discusses the importance of citizen monitoring; however, the government does not want to promote excessive disobedience or uncontrolled protests.
- **Political action.** We asked students whether they had reported government misconduct; whether they had participated in protests; whether they had voted; and, whether they had joined various political organizations. We do not focus on these outcomes because college students in China do not have many opportunities to engage in political action. Instead, we study political action by studying a broader sample of individuals (see Section 5.2 in the main text and Table A.5).
- **Bribery.** We asked students about the necessity of making unofficial payments in a variety of settings; we also asked about the efficacy of paying bribes and about students' views on the morality of paying bribes. These variables are outcomes closely related to the new curriculum's discussion of the importance of rule of law; however, there is less direct discussion of bribery or corruption in the government documents structuring the curriculum reform.
- **Equity/Efficiency tradeoffs.** We asked students whether they would be willing to trade-off lower growth rates or lower incomes in return for greater equity. We do not focus on these questions in the paper because the government's aims here are competing: growth is a high

priority, as is equity (perhaps with efficiency taking precedence). We also asked students to play an incentivized game revealing their preferences regarding equity/efficiency tradeoffs.

Finally, several sections of the survey were not intended to be outcomes in our current analysis of the impact of the new curriculum on students' political attitudes:

- **Career preferences.** We asked students about the types of organizations and locations in which they would prefer to work.
- **Risk preferences.** We asked students about their taste for risk generally, in a hypothetical investment decision, and regarding career choices.
- **Investments.** The new curriculum included a discussion of modern financial markets and assets that was not part of the old curriculum. We asked students about their taste for investing in risky assets, and about their experience investing in different assets.
- **Students' views on the determinants of success and the returns to schooling.** We asked students for their opinions on the determinants of success in Chinese society (hard work, connections, etc.); we also asked them a set of questions eliciting their beliefs about the returns to schooling.
- **Personality.** We asked students questions from a standard "Big 5" personality traits survey.
- **Values.** We asked about the values students considered important (e.g., independence, imagination, religious faith, obedience, etc.).
- **Incentivized risk preference game.** We asked students to play an incentivized game to evaluate their risk preferences. We do not examine this as an outcome, but we do use it to "validate" students' stated preference responses to a direct question about their preferences.

### E.3 Screenshot of online survey



勺海营销研究集团  
DATASEA MARKETING RESEARCH GROUP

#### N、政策目标

N1. 人们经常谈论这个国家未来十年的目标。以下列出了一些常见的国家的目标。请您选择您所认为的最值得优先考虑的国家目标。（单选）

- 高速的经济增长
- 持久的经济稳定
- 维护国家的秩序
- 让人民在重要政府决策上有更多的发言权
- 保护环境

N2. 以下是人们谈论环境和经济发展问题的时候，经常使用的两个论断。这两个论断哪一个更接近您自己的观点？（单选）

- 环境保护应该给予优先考虑，即使这样做会导致经济发展趋缓，就业机会减少
- 经济发展和创造就业机会应该给予优先考虑，即使这样做会导致环境遭到一定程度上的损害

 继续

请确认答案的准确性，点击“继续”后将无法回到当前页。且请勿使用浏览器的上一页按钮

E.4 Photo of student respondent (raffle winner)



## E.5 Follow-up survey

As an additional check that the treatment effects we estimate from the online survey do not significantly differ from what we would find among non-respondents at Peking University, we conducted a small, paper and pencil follow-up survey using in-person recruitment, in June and July, 2014. The follow-up survey was conducted by a team of 18 Peking University undergraduates, who recruited survey participants in the Peking University dorms, and handed out a paper version of the same survey questionnaire as was used online (to be completed individually, and privately). In order to recruit students across majors and genders, the survey team included a mix of men and women; teams recruited in dorms across the Peking University campus, including on the medical campus.

Potential participants in the follow-up survey were reminded of the spring online survey, and were asked not to complete the in-person survey if they had already completed the online survey. The survey team emphasized that the survey data would only be used for academic research and that respondents' privacy would be protected. Overall, 446 students who had not completed the online survey were asked to complete the paper survey; the response rate in the follow-up survey was 78%, for a total of 347 respondents. Respondents were paid 30 RMB (around \$5) for participating in the follow-up survey, and required around 30 minutes to complete the survey. A data entry firm digitized the responses, and two research assistants manually checked a random subset of the responses for accuracy.

## Appendix F Additional results

In this section we present several additional results that complement our main analysis. First, we examine the effects of the new curriculum on political attitudes that are of interest to us, but that are not our focus in the body of the paper because they are not discussed in the government documents outlining the curriculum reform, are not associated with changes in the textbooks' content, or because there is some ambiguity in the government's desired attitudes. Next, we replicate our baseline analysis of the five broad categories of outcomes studied above, but rather than using z-scores, we use first principal components of outcomes for each category. Then, we present evidence on the effects of informative content (as opposed to ideological content) in the new curriculum on students' factual knowledge (as opposed to their attitudes). Finally, we study the relationship between reported political attitudes and political behavior using data from the AsiaBarometer survey.

### F.1 Analysis of additional political attitudes

#### Views on the wisdom of the masses

The emphasis on Chinese democratic institutions in government documents outlining the reforms, and in the new curriculum, raises an interesting question: do students who studied under the new curriculum trust in the wisdom of the people more than students who studied under the old curriculum? This is ambiguous from the discussion of democracy in Chinese government documents and in the new textbooks: while a great deal of attention is devoted to discussing political participation, there is also an emphasis on voting and political participation as a *responsibility*. The new curriculum (quoted in the main text) states, "Citizens have to continue improving themselves in participating in democratic elections, so that they can exercise their voting rights well." We asked students several questions in the survey to study students' views on "the people's" competence in choosing good officials; we construct our standard index based on these questions, with variables coded such that more positive beliefs about the wisdom of the masses would lead to a positive change in the index.

In Table A.1, column 1, we present the estimated effect of the new curriculum on students' views of the wisdom of the masses in selecting leaders. We find that, if anything, students under the new curriculum are more *skeptical* about the wisdom of the masses than are students under the old curriculum. This is consistent with the emphasis in the new curriculum on the responsibilities of citizens under a democracy, and with some skepticism among students regarding the preparation of the majority of the Chinese population for those responsibilities.

#### Political disobedience

Along with discussions of rule of law and democracy (emphasized above), there is a significant discussion in the new curriculum of the importance of citizen monitoring of government officials. Active citizen monitoring of government is another ambiguous issue among Chinese officials (see, e.g., Lorentzen, 2013): on the one hand, monitoring of local officials is seen as crucial for the maintenance of social order and for limiting corruption. On the other hand, monitoring—often made effective in the form of protests—can be destabilizing (and the new curriculum certainly does not promote protesting or disobeying the law). To determine whether the increased emphasis on monitoring officials affected students' views on disobeying the government or engaging in protests, we included several questions about attitudes toward "disobedience." We again construct an index

based on these questions, coded such that a positive change in the index indicates more positive views toward protest and disobedience.

In Table A.1, column 2, we present the estimated effect of the new curriculum on students' views on political disobedience. We again find no statistically significant effect of the new curriculum, and if anything students view disobedience more *negatively* if they studied under the new curriculum.

### **Political actions**

Next, we examine students' reported political *actions*, rather than attitudes. These reported actions are not our focus: Chinese college students typically have very little time or opportunity to engage in political acts such as protesting government policies; voting opportunities may vary depending on students' hometowns, ages, and the timing of elections. Still, we asked students about these activities. We also asked them whether they participated in political organizations. We construct an index of students' reported political activities, and find no effect of the new curriculum on this index (Table A.1, column 3). We discuss the relationship between stated attitudes and political behavior using a broader sample of Chinese individuals in the main text, Section 5.2 and present empirical results in Table A.5.

### **Views on unofficial payments**

Although the Chinese government does not specifically discuss bribery or corruption in its documents shaping the curriculum reform, the emphasis on government legitimacy arising from adherence to the rule of law throughout the government documents, and throughout the new curriculum, suggests that students' views on the role of bribery in Chinese society might also be affected by studying under the new curriculum. To examine whether this was the case, we asked students a range of questions about the prevalence and efficacy of bribery in different settings. We construct our standard index using these questions, with components coded such that the index is more positive when students view bribes as less necessary, less prevalent, and less effective.

In Table A.1, column 4, we present the estimated effect of the new curriculum on students' views on unofficial payments and find that these move in the direction one would expect: students under the new curriculum generally see bribery as less necessary in various settings—for example, interacting with traffic police or requesting official documents—and also view bribes as less effective.

### **Views on efficiency/equity tradeoffs**

We next examine whether students' views on tradeoffs between efficiency and equity have changed as a result of studying under the new curriculum. The curriculum and government documents are somewhat ambiguous on this point: while there is certainly discussion of concerns about equity and social inequality, economic development and efficiency often seem to take precedence over concerns regarding equity. Because social inequality is such a pressing issue in contemporary China, we included questions (and an incentivized game) to gauge students' preferences with respect to equity/efficiency tradeoffs. We construct an index based on several survey questions and the incentivized game, with more positive values of the index indicating preferences for greater efficiency (which seems to be emphasized under the new curriculum).

In Table A.1, column 5, we present the estimated effect of the new curriculum on students' preferences with respect to equity/efficiency tradeoffs. We find that studying under the new curriculum, indeed, moves students toward favoring efficiency over equity.

### **Views on the “Three Represents”**

An important development in Chinese Communist Party doctrine since the year 2000 was the “Three Represents” ideology expounded by former President Jiang Zemin. According to this ideology, political influence in China should be extended to individuals who were *de facto* important to China’s socioeconomic success, but who were traditionally excluded from power in Communist China—for example, managers and employees working for private businesses. To determine whether the new curriculum affected students’ views on who should play a role in shaping Chinese government policy, we directly asked students whether various segments of society should play such a role, and coded a dummy variable equal to 1 if students selected some members of “outsider” groups in their top 3 list (outsiders included intellectuals and employees at foreign firms).

In Table A.1, column 6, we present the estimated effect of the new curriculum on students’ views on outsiders’ participation in shaping Chinese government policy, and find that the new curriculum moved students’ attitudes in a direction consistent with the “Three Represents” ideology.

### **F.2 Principal component analysis**

As another check of the robustness of our results, we present results estimating the effects of the new curriculum on our various indices, but rather than using a weighted sum of standardized outcomes within a category, we examine the first principal component of the outcomes within a category. In Table A.3, we show our baseline regressions for the outcomes for which we previously used z-score indices (compare to Table 9, Panel A). One can see that our results are very similar constructing our indices in this alternative manner.

### **F.3 Changes in factual knowledge**

In addition to ideological content, the new curriculum included new informative content regarding political institutions. We next examine whether factual details of China’s political system were differentially *known* by individuals who studied under the new curriculum, specifically, whether students were aware of elections for the position of village head and elections for local People’s Congress representatives.

In Table A.4, columns 1 and 2, we examine the impact of the new curriculum on factual knowledge regarding Chinese political institutions, estimating our baseline regression model. We expect, given the additional content on elections in the new curriculum, that students who studied under the new curriculum would be more likely to report being aware of village head and People’s Congress representatives’ elections. Indeed, one can see that for both of these outcomes, study under the new curriculum is associated with greater reported knowledge of Chinese elections. An index variable outcome based on these two factual questions also shows an effect of the new curriculum on students’ knowledge of Chinese political institutions (Table A.4, column 3).

### **F.4 Attitudes and behavior**

In section 5.2, we relate our finding of increased trust in government officials to behavioral outcomes, generalizing from the relationship between reported attitudes and reported behavior observed in the AsiaBarometer survey. This survey asks respondents about their trust in various

government officials—central government, local government, courts, armed forces, and police. The only differences between our survey questions and the AsiaBarometer questions are, first, that AsiaBarometer respondents indicate their level of trust on a 1–4 scale, rather than a 1–5 scale; and, second, that we specifically ask about trust in both local and provincial governments, while AsiaBarometer asks only about trust in local government. Based on the questions in the AsiaBarometer survey, we can also construct a z-score index of trust in government officials, just as in the main analysis of this paper. To ensure comparability with our survey sample, we limit our analysis to Chinese respondents with at least 12 years of schooling.

The AsiaBarometer survey also asks the following two questions about political action:

---

Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have never, once, or more than once done any of these things during the past three years:

---

1. Attended a demonstration or protest march.
  2. Refused to pay taxes or fees to the government.
- 

We regress reported political actions on reported levels of trust in government officials, controlling for respondents' age (and age squared) and gender.<sup>7</sup> Across trust measures, we find that greater trust in government officials is associated with significantly less frequent participation in demonstrations and protests; we also find that across measures of trust in government officials, greater self-reported trust is associated with significantly less self-reported refusal to pay taxes and fees (results are presented in Table A.5). Looking at the summary trust index, we find that increasing the index by one standard deviation makes an individual 13.5 percentage points less likely to attend a demonstration, or 5 percentage points less likely to refuse to pay taxes or fees. In section 5.2 above, we then put these findings in relation to the changes in trust induced by the new curriculum.

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<sup>7</sup>Excluding these controls does not affect our results.

Table A.1: Additional political attitudes

Dependent variable:	z-score index (Mass democracy)	z-score index (Disobedience)	z-score index (Political action)	z-score index (Bribes)	z-score index (Equity/efficiency)	Expand policy influence beyond CCP members
	(1)	(2)	(3)	(4)	(5)	(6)
New Curriculum	-0.134 [0.092]	-0.040 [0.076]	-0.009 [0.088]	0.124 [0.072]	0.131 [0.078]	0.077 [0.032]
p-value	(0.146)	(0.601)	(0.923)	(0.086)	(0.098)	(0.018)
bootstrapped p-value	(0.276)	(0.682)	(0.896)	(0.202)	(0.258)	(0.058)
Observations	1,529	1,755	1,698	1,733	1,610	1,715
Mean DV	0	0	0	0	0	0.838
Std.Dev. DV	1	1	1	1	1	0.369

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level (116 clusters). The z-score indices in columns 1–5 (weighting by the inverse covariance of the standardized outcomes) are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table A.2: Distribution of responses: trust in government institutions

Dependent variable:	Trust central government		Trust provincial government		Trust local government		Trust courts		Trust armed forces		Trust Police		VH self-interested (disagree)		VH serves rich (disagree)	
	Old (1)	New (2)	Old (3)	New (4)	Old (5)	New (6)	Old (7)	New (8)	Old (9)	New (10)	Old (11)	New (12)	Old (13)	New (14)	Old (15)	New (16)
1	0.72	0.50	1.08	0.83	3.76	1.74	1.43	0.91	1.97	0.66	2.68	0.83	4.31	3.01	2.51	1.25
2	3.58	2.81	7.53	5.88	19.50	14.42	5.19	5.13	4.84	4.39	9.12	7.20	21.72	17.89	13.62	10.69
3	17.71	14.40	35.84	27.82	47.76	45.24	33.99	28.73	25.99	23.84	37.75	37.25	45.24	43.65	39.96	36.17
4	56.89	59.19	48.57	57.12	23.83	35.71	53.13	56.54	51.43	50.17	43.29	48.43	25.67	31.27	34.95	39.52
5	21.11	23.10	6.99	8.86	2.15	2.90	6.26	8.69	15.77	20.94	7.16	6.29	3.05	4.18	8.96	12.36
Observations	559	1208	558	1208	559	1207	559	1208	558	1208	559	1208	557	1196	558	1197
Mean DV	3.94	4.02	3.53	3.67	3.04	3.24	3.58	3.67	3.74	3.86	3.43	3.52	3.01	3.16	3.34	3.51
Std.Dev. DV	0.77	0.73	0.78	0.75	0.84	0.79	0.75	0.74	0.85	0.82	0.86	0.75	0.88	0.87	0.91	0.89

Table shows the distribution of responses, split by curriculum studied, to the various questions regarding trust in government officials and government bodies studied in Table 3.

Table A.3: First principal components

Dependent variable:	First p.c. (Trust in gov.)	First p.c. (Democracy)	First p.c. (Minorities, Han)	First p.c. (Minorities, non-Han)	First p.c. (Environment)
	(1)	(2)	(3)	(4)	(5)
New Curriculum	0.495 [0.167]	0.250 [0.082]	0.105 [0.094]	0.230 [0.355]	-0.173 [0.113]
p-value	(0.004)	(0.003)	(0.266)	(0.519)	(0.130)
bootstrapped p-value	(0.046)	(0.028)	(0.202)	(0.258)	(0.058)
Observations	1,753	1,724	1654	141	1,708
Mean DV	0	0	0	0	0
Std.Dev. DV	1.981	1.234	1.204	1.118	1.141

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level (116 clusters). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table A.4: Factual knowledge

Dependent variable:	Aware VH elected	Aware that able to vote local PCR	z-score index (Factual knowledge)
	(1)	(2)	(3)
New Curriculum	0.079 [0.034]	0.037 [0.028]	0.198 [0.075]
p-value	(0.022)	(0.183)	(0.010)
FDR adjusted p-value	(0.047)	(0.101)	.
bootstrapped p-value	(0.086)	(0.364)	(0.022)
Observations	1,754	1,755	1,754
Mean DV	0.765	0.871	0
Std.Dev. DV	0.424	0.335	1

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level (116 clusters). The z-score index in column 3 (weighting by the inverse covariance of the standardized outcomes) and the FDR adjusted p-values are computed following Anderson (2008). The bootstrapped p-values allow for correlated error terms across observations within a province (see Cameron et al., 2008).

Table A.5: Outcomes from AsiaBarometer

Dependent variable:	Attended a demonstration or protest march				Refused to pay taxes or fees to the government							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Trust central government	-0.017* [0.010]						0.002 [0.011]					
Trust local government		-0.020** [0.009]						-0.023*** [0.008]				
Trust courts			-0.021** [0.009]						-0.018* [0.010]			
Trust armed forces				-0.005 [0.007]						-0.016 [0.013]		
Trust police					-0.020** [0.009]						-0.015* [0.008]	
z-score index						-0.022** [0.009]						-0.011 [0.009]
Observations	956	958	953	953	955	875	956	958	953	953	955	875
Mean DV	0.0166	0.0166	0.0166	0.0166	0.0166	0.0166	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313
Std.Dev. DV	0.160	0.160	0.160	0.160	0.160	0.160	0.208	0.208	0.208	0.208	0.208	0.208

All regressions control for gender, age, and age<sup>2</sup>. Samples restricted to individuals who completed at least high school education. The z-score index in columns 6 and 12 (weighting by the inverse covariance of the standardized outcomes) is computed following Anderson (2008).

# Survey on Peking University Undergrads 2013/04

## A. Personal Background

1. Dorm address and room number
2. Date of birth (year/month/day)
3. Height (cm)
4. Ethnicity  
    a = Han            b = Zhuang      c = Man            d = Hui  
    e = Miao          f = Uyghur      g = Others
5. Gender  
    a = Male                      b = Female
6. Birthplace (province/city)
7. Hukou/migration status before entering college  
    a = Urban                      b = rural
8. College major
9. Number of siblings
10. Father's educational attainment (only count the level that is completed)  
    a = No schooling      b = Elementary school      c = Junior high  
    d = High school      e = Vocational college      f = College and above
11. Father's Hukou/migration status  
    a = Urban                      b = rural
12. Father's occupation  
    a = Agricultural              b = Non-agricultural
13. Mother's educational attainment (only count the level that is completed)  
    a = No schooling      b = Elementary school      c = Junior high  
    d = High school      e = Vocational college      f = College and above
14. Mother's Hukou/migration status  
    a = Urban                      b = rural
15. Mother's occupation  
    a = Agricultural              b = Non-agricultural
16. Either parent a member of CCP?  
    a = Yes                          b = No
17. Date of entry into high school (year/month)
18. Date of high school graduation (year/month)
19. Province where you completed 10th grade
20. Have you ever taken Gaokao?
21. In which province did you take Gaokao?

22. Besides Chinese, Math and English, what other subjects did you choose to be tested on during Gaokao (multiple choice)
- a = Physics                      b = Chemistry                      c = Biology  
d = Politics                      e = History                      f = Geography
23. Have you been you a member of the Communist Party youth organization?
- a = Yes                      b = No
24. Are you a CCP member, or reserved member of the CCP?
- a = Yes                      b = No
25. Where do you obtain news and other important information?  
Please rank your top three information sources from the following:
- a = Domestic TV                      b = Domestic radio                      c = Domestic internet sites  
d = Domestic newspaper and magazines                      e = SMS  
f = Friends                      g = Others
26. How often do you obtain news and other important information from foreign websites?
- a = More than once a day                      b = Once a day  
c = Once a week                      d = Once a month  
e = Less often than once a month
27. Typically, how do you get access to foreign websites?
- a = Do not go to foreign websites at all  
b = Free access from the library  
c = Peking University internet service bundle  
d = Other private internet services (e.g. Netpas)  
e = Other channel (please specify)
28. What's your typical purpose going on foreign websites? Please rank your top 3 purposes.
- a = Reading news                      b = Entertainment  
c = Social network                      d = Searching for information/resources  
e = Applying for foreign schools                      f = Academic reasons  
g = Others (please specify)
29. Do you own a computer on campus?
- a = Yes                      b = No, use dorm mate's computer  
c = No, use library's computer                      d = Others (please specify)

## B. Parochial Pro-social Behavior & Views on Minorities

30. Generally speaking, would you say that most people can be trusted, or that you cannot be too careful in dealing with people?
- a = Completely trustworthy                      b = Relatively trustworthy  
c = Neutral                      d = Relatively careful  
e = Completely untrustworthy, need to be very careful

31. Generally speaking, would you say that people in minority groups can be trusted, or that you cannot be too careful in dealing with them?
- a = Completely trustworthy                      b = Relatively trustworthy  
 c = Neutral    d = Relatively careful  
 e = Completely untrustworthy, need to be very careful
32. China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree more?
- a = Comparing to Han Chinese, ethnic minority groups are relatively independent groups.  
 b = Ethnic minority groups are the same as Han Chinese, and they are all Chinese people.
33. China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree more?
- a = Ethnic minority groups share the same historic heritage and cultural traditions as the Han Chinese.  
 b = Ethnic minority groups have different historic heritage and cultural traditions with the Han Chinese.
34. Can you imagine yourself marrying a member from a different ethnic group in the future?
- a = Can imagine                                      b = Cannot imagine
35. Does Japan do more good or harm to the region?
- a = Much more good than harm                      b = Somewhat more good than harm  
 c = Equal harm and good                              d = Somewhat more harm than good  
 e = Much more harm than good                      f = Don't know

### C. Efficiency, Fairness and Growth

As we all know, the government's fiscal resources are limited. Would you be willing to give part of your income or pay more taxes, if you were sure that the extra money was used to:

- a = Support    b = Don't support
36. Improve social welfare (education, support for the poor, health care, etc.)
37. Protect the environment
38. Improve infrastructure (roads, ports, railroads, etc.)
39. Which of the following statements do you agree with more?
- a = Government should enact policies that make the distribution of income more equal, even if they reduce the rate of economic development.  
 b = Government should enact policies that increase the rate of economic development, even if they make the distribution of income more unequal.

#### D. Success, Effort, and Fairness

40. What determines the success of a business? Pick two of the following:
- |                          |                            |
|--------------------------|----------------------------|
| a = Guanxi               | b = Business strategy      |
| c = Corruption           | d = Quality of the product |
| e = Corporate management | f = Luck                   |
41. Wealth reflects personal achievement.
- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |
42. In China today, hardworking has fair returns.
- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |
43. In China today, ability and talents have fair returns.
- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |
44. In China today, corruption is unavoidable if you want to be successful.
- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

#### E. Career Preferences

45. Rank the top three types of jobs from the following in terms of their appeal to you:
- |   |  |
|---|--|
| a = Working in the national civil service   | b = Working in the local civil service   |
| c = Working in the military   | d = Working for a Chinese private firm   |
| e = Working for a foreign firm in China   | f = Working for a state-owned enterprise |
| g = Working for institutional organizations (e.g. school, hospital, research institute, etc.) |  |
| h = Starting your own firm as an entrepreneur   |  |
| g = Others  |  |
46. Rank the following locations in terms of their appeal to you as places to live and work:
- |                       |                                    |
|-----------------------|------------------------------------|
| a = Hometown          | b = Beijing / Shanghai / Guangzhou |
| c = Hong Kong / Macau | d = A foreign country              |
| e = Others            |                                    |

## F. Risk Preferences

47. Generally speaking (either in life or work), please tick a box on the scale, where the value 0 means: “unwilling to take risks” and the value 10 means: “fully prepared to take risk.”
48. Regarding your future career life, please tick a box on the scale, where the value 0 means: “unwilling to take risks” and the value 10 means: “fully prepared to take risk.”
49. If you had 10,000RMB that you were saving in the bank, how much, if any, would you choose to invest in the stock market?
- |                          |                                    |
|--------------------------|------------------------------------|
| a = 0%                   | b = More than 0% but less than 25% |
| c = Between 25% and 50%  | d = Between 50% and 75%            |
| e = Between 75% and 100% | f = 100%                           |

## G. Trust in Institutions

On a 1-5 scale, with 1 meaning complete distrust, and 5 meaning complete trust, describe your level of trust in the following institutions:

50. Central government
51. Provincial government
52. Local government
53. Courts
54. Armed forces
55. Police
56. Non-governmental organizations (NGOs)
57. Banks and financial system
58. Foreign investors

## H. Political Participation (Supervision of Government)

For the following questions, choose either:

a = Yes            b = No

59. I know that the village head is elected by ordinary people through vote (one-man one-vote).
60. I know that I can participate in the voting of local (county or district) People’s Congress representatives.
61. I have voted for local (county or district) People’s Congress representatives before.
62. My parents have voted for local (county or district) People’s Congress representatives before.
63. I plan to vote for local (county or district) People’s Congress representatives.

For the following questions, please choose:

a = Strongly disagree

b = Disagree

c = Neutral

d = Agree

e = Strongly agree

64. Ordinary people can judge who would make a better village head.
65. In reality, ordinary people are able to influence who becomes the village head.
66. Theoretically speaking, ordinary people should be able to influence the decision of who becomes the village head.
67. Village heads put their own interest before those of people.
68. Village heads care primarily about the powerful and rich people, and neglect the interests of ordinary people.
69. Ordinary people know clearly which leader is doing a better job.
70. If government does not operate according to the law, people should have the rights to disobey the government.
71. I'm not fearful of officials and I don't hesitate to object to any official who has done something wrong, or report his misconduct to the authorities.
72. I can't stand the powerful and influential bullying the powerless and the weak. I like to stand up for the weak.

### I. Use of Unofficial Payments (Illegal Economic Activities)

In your opinion, how often is it necessary for people like you to have to make unofficial payments/ gifts in these situations:

a = Never

b = Seldom

c = Sometimes

d = Usually

e = Always

73. Interacting with the traffic police?
74. Requesting official documents (such as passport or birth certificate)?
75. Interacting with the civil courts?
76. Interacting with the providers of primary or secondary education?
77. Interacting with doctors?

For the following questions, please choose:

a = Yes

b = No

78. Do you think that paying a bribe is an acceptable way to accomplish something?
79. Do you think that paying a bribe is an effective way to accomplish something?
80. From the perspective of local government officials, do you think they would accept bribe when it is offered to them?
81. If you were making decisions for a company. Would you let your company carry on profitable activities that are not illegal, but not quite moral?

## J. Political and Economic Institutional Preferences

82. For the following statements regarding market economy, choose one that you agree the most:
- a = A market economy is preferable to any other form of economic system.
  - b = Under some circumstances, a planned economy may be preferable to a market economy.
  - c = For people like me, it does not matter whether the economic system is organized as a market economy or as a planned economy.
  - d = Do not know.
83. For the following statements regarding democracy, choose one that you agree the most:
- a = Democracy is preferable to any other form of political system.
  - b = Under some circumstances, an authoritarian government may be preferable to a democratic one.
  - c = For people like me, it does not matter whether a government is democratic or authoritarian.
  - d = Do not know.
84. From your own perspective, which of the following do you think are characteristics of a democracy? List them in order of importance to you. (1=most important, 5=least important)
- a = Direct election of national government representatives
  - b = Freedom of speech and press
  - c = The management of the country reflects the will of the ruling class
  - d = People's participation in the political process
  - e = Competitive election
85. Where would you place our country under the present government?
- | Completely undemocratic |   |   |   |   | Completely democratic |   |   |   |    |
|-------------------------|---|---|---|---|-----------------------|---|---|---|----|
| 1                       | 2 | 3 | 4 | 5 | 6                     | 7 | 8 | 9 | 10 |
86. Here is a similar scale of 1 to 10 measuring the extent to which people think democracy is suitable for our country.
- | Completely unsuitable |   |   |   |   | Completely suitable |   |   |   |    |
|-----------------------|---|---|---|---|---------------------|---|---|---|----|
| 1                     | 2 | 3 | 4 | 5 | 6                   | 7 | 8 | 9 | 10 |

## K. Qualifications for Leadership ("Three Represents" and the Middle Class)

87. Which of the following groups and their interests should influence government policy? (Please rank the top three)
- a = Farmer/peasants
  - b = Township or village enterprise employees
  - c = Factory workers
  - d = SOE employees
  - e = Private enterprise employees
  - f = SOE managers
  - g = Private enterprise managers/owners
  - h = Teachers
  - i = Intellectuals

j = Celebrities  
l = Government officials  
n = Bank owners (or managers in financial sector)  
o = Employees at foreign firm

k = Civil servants  
m = CCP members

88. What qualities should qualify a person for membership in the CCP?

a = Farmer/peasants  
c = Factory workers  
e = Private enterprise employees  
g = Private enterprise managers/owners  
h = Teachers  
j = Celebrities  
l = Government officials  
n = Bank owners (or managers in financial sector)  
o = Employees at foreign firm

b = Township or village enterprise employees  
d = SOE employees  
f = SOE managers  
i = Intellectuals  
k = Civil servants  
m = CCP members

89. What qualities should qualify a person for membership in the CCP?

a = Ideology  
c = Income  
e = Family ties

b = Political mission  
d = Social status  
f = Others

90. What qualities, to the best of your knowledge, actually do qualify a person for membership in the CCP?

a = Ideology  
c = Income  
e = Family ties

b = Political mission  
d = Social status  
f = Others

## L. Values

91. Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? (can choose up to three)

a = Independent  
c = Feeling of responsibility  
e = Tolerance and respect for other people  
f = Thrift, saving money and things  
g = Determination, perseverance  
i = Unselfishness  
k = Self-expression

b = Hard work  
d = Imagination  
h = Religious faith  
j = Obedience

### M. Policy Goals (Future of the Nation)

92. People often talk about what the goals of this country should be for the next ten years. Listed below are some common goals for a nation. Please pick the one that you consider as primary for a nation.
- a = A high level of economic growth
  - b = Maintaining economic stability
  - c = Maintaining order in the nation
  - d = Giving people more say in important government decisions
  - e = Protecting the environment
93. Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view?
- a = Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs.
  - b = Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent.

### N. National and International Identity

94. Where would you place your identity on a spectrum, with being Chinese on one end and being a world citizen on the other end?
- |                       |   |                           |   |                    |
|-----------------------|---|---------------------------|---|--------------------|
| Chinese identity only |   | Equal mixture             |   | World citizen only |
|                       |   | Chinese and world citizen |   |                    |
| 1                     | 2 | 3                         | 4 | 5                  |
95. I see myself as an autonomous individual.
- a = Strongly disagree
  - b = Disagree
  - c = Neutral
  - d = Agree
  - e = Strongly agree
96. Of course, we all hope that there will not be another war, but if it were to come to that, would you be willing to fight for your country?
- a = Yes
  - b = No

### O. Actual Actions

97. Have you ever complained to school authorities to protect your personal interest (e.g. regarding tuition, dorm assignment)?
- a = Yes
  - b = No



109. On a scale of 1 to 5, how much do your teacher encourage participation during lecture?
110. On a scale of 1 to 5, how much do your teacher encourage you to study and explore the answers on your own, as opposed to tell you the answer up front?
111. On a scale of 1 to 5, how much do you think memorizing material is important in doing well in school?
112. On a scale of 1 to 5, how much do you think is class/lecture or teaching activity centered on Gaokao preparation?

### Q. Value of Education (Perceived Returns on Schooling)

113. Suppose, hypothetically, you were to top school after finishing junior high. Think about the kinds of jobs you might be offered and that you might accept. How much do you think you will earn in a typical week, month or year when you are about 30 to 40 years old?
114. How about if you were to stop school after finishing senior high?
115. How about if you were to stop school after finishing this school year?
116. How about if you were to stop school after finishing college?
117. Now, we would like you to think about adult men who are about 30 to 40 years old and who have completed only elementary school. Think not just about the ones you know personally, but all men like this throughout the country. How much do you think they earn in a typical week, month or year?
118. How about if he were to stop school after finishing junior high?
119. How about if he were to stop school after finishing senior high?
120. How about if he were to stop school after finishing college?

### R. Big Five Personal Traits

On each numerical scale that follows, indicate which point is generally more descriptive of you. If the two terms are equally descriptive, mark the midpoint.

- |      |                                |   |   |   |  |                    |
|------|--------------------------------|---|---|---|--|--------------------|
| 121. | Eager                          |   |   |   |  | Calm               |
|      | 1                              | 2 | 3 | 4 |  | 5                  |
| 122. | Prefer Being with Other People |   |   |   |  | Prefer Being Alone |
|      | 1                              | 2 | 3 | 4 |  | 5                  |
| 123. | A Dreamer                      |   |   |   |  | No-nonsense        |
|      | 1                              | 2 | 3 | 4 |  | 5                  |
| 124. | Courteous                      |   |   |   |  | Abrupt             |
|      | 1                              | 2 | 3 | 4 |  | 5                  |
| 125. | Neat                           |   |   |   |  | Messy              |
|      | 1                              | 2 | 3 | 4 |  | 5                  |

126.	Cautious				Confident
	1	2	3	4	5
127.	Optimistic				Pessimistic
	1	2	3	4	5
128.	Theoretical				Practical
	1	2	3	4	5
129.	Generous				Selfish
	1	2	3	4	5
130.	Decisive				Open-ended
	1	2	3	4	5
131.	Discouraged				Upbeat
	1	2	3	4	5
132.	Exhibitionist				Private
	1	2	3	4	5
133.	Following Imagination				Following Authority
	1	2	3	4	5
134.	Warm				Cold
	1	2	3	4	5
135.	Stay Focused				Easily Distracted
	1	2	3	4	5
136.	Easily Embarrassed				Don't Give a Darn
	1	2	3	4	5
137.	Outgoing				Cool
	1	2	3	4	5
138.	Seek Novelty				Seek Routine
	1	2	3	4	5
139.	Team Player				Independent
	1	2	3	4	5
140.	A Preference for Order				Comfortable with Chaos
	1	2	3	4	5
141.	Distractible				Unflappable
	1	2	3	4	5
142.	Conversational				Thoughtful
	1	2	3	4	5
143.	Comfortable with Ambiguity				Prefer Things Clear-cut
	1	2	3	4	5
144.	Trusting				Skeptical
	1	2	3	4	5
145.	On Time				Procrastinate
	1	2	3	4	5