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Academic Capitalism, Managerialization, and the Change of Attitude towards Scientific Misconduct: *Surveys on Chinese PhD Graduates*

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Background

- Increasing concerns about scientific misconduct in China
 - From scientific community
 - From government
 - From public
- Is the environment of integrity worsen overtime in China?
 - Measuring the environment

Ph.D. students' attitude to scientific integrity

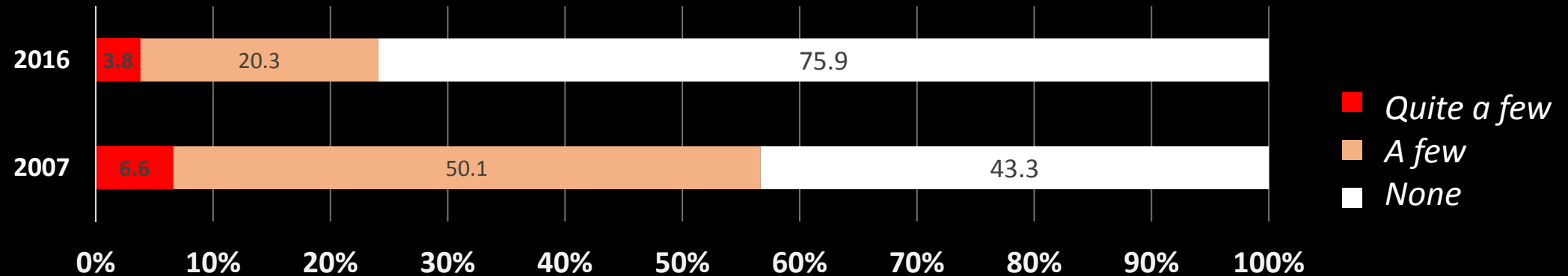
- Ph.D. students constitute the main body of future scientists
- Their knowledge of and attitude towards scientific integrity determines the general level of integrity in the future
- Few studies, however, had been conducted about it in China
- Even less empirical studies

Data

- Two national surveys on PhD graduates' occupational orientation in China
- Both conducted by CASTED, funded by CAST
- 2007, multi-stage cluster sampling, 3000 students in 14 universities/institutes were sent self-administrated questionnaire, 1903 valid questionnaires collected
- 2016, multi-stage cluster sampling, 55 universities/institutes, 9219 samples, 4018 valid questionnaires collected

- In the survey, scientific Misconduct is defined as:
 - Fabrication/Falsification
 - Plagiarism
 - Duplicate Submission/publication
 - inappropriate authorship

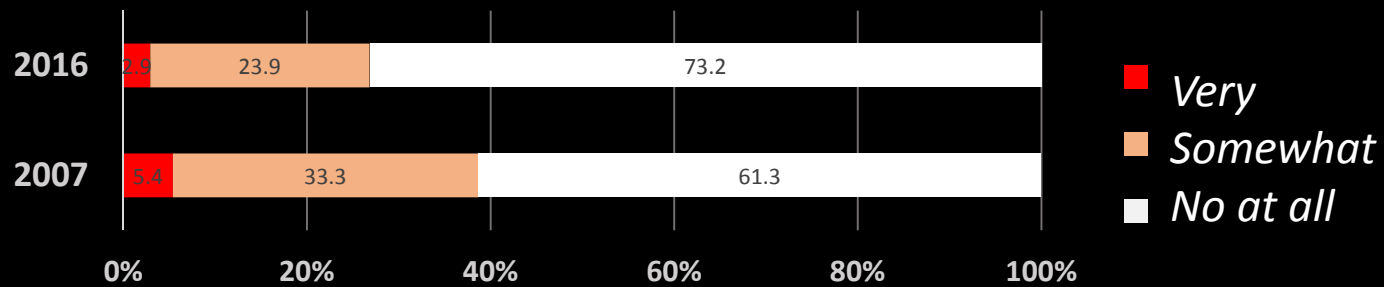
Perception of misconducts



- When being asked if they know the people around had committed misconducts
 - In 2007, 6.6% of PhD students said that they knew *quite a few* people committed misconduct, 50.1% said they knew *a few*. Altogether, **56.7% knew someone around committed misconduct**
 - In 2016, 3.8% of PhD students said that they knew *quite a few* people committed misconduct, 20.3% said they knew *a few*. The total percentage dropped to **24.1%**

Attitude to misconducts

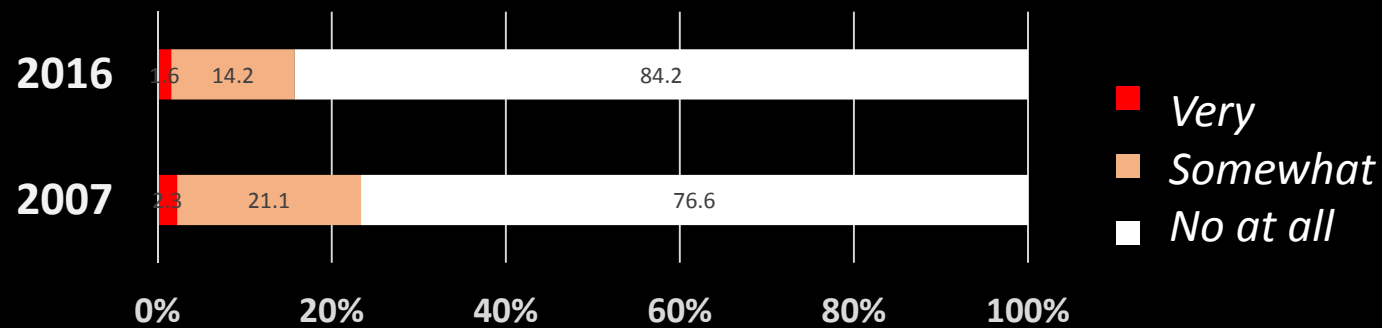
sympathy



- In 2007, around **39%** of students said that they felt sympathy for those who committed misconduct
In 2016, only **27%** thought so

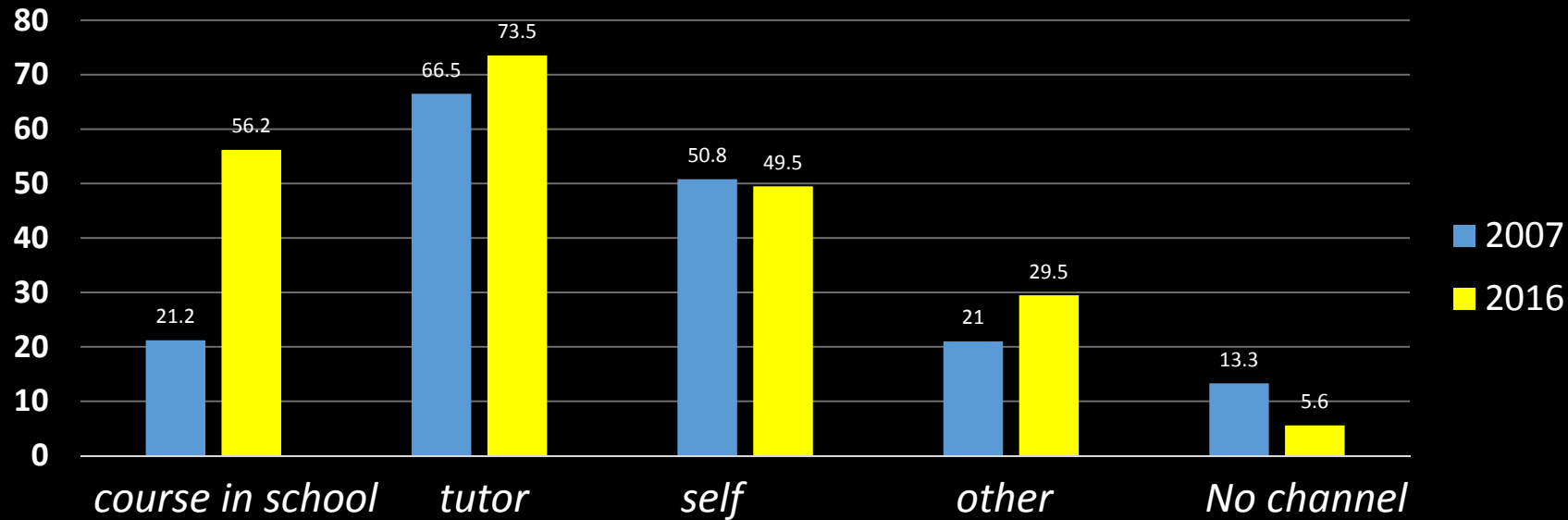
- In 2007, **23%** of students thought that they can forgive those who committed misconduct
- In 2016, the percentage dropped to **16%**

forgive



Knowledge about norms of integrity

Channels of knowledge



- In 2007, the main channels to gain knowledge of norms are by instruction of tutors (66.5%) , and by self-learning (50.8%)

- In 2016, instruction of tutor is still the main channel. Courses in school became the second most important channel of knowledge, around 56% of students used this channel, much higher than that of 2007 (21%)

What is influencing their Attitudes?

- Existing studies focus on...
 - Personal characteristics
 - Organizational characteristics
 - Social environment, networks

Perspective of scientific culture

- Scientific culture provided researchers with value and norms of research
 - Eg. Merton's *ethos of science*
- However, traditional scientific culture is facing challenges
 - Eroded by power: *Managerialization*
 - Eroded by capital: *Academic capitalism*
- Transition and anomie

Hypothesis

- *H1: Ph.D. students who stick to traditional academic culture are less likely to be tolerant to misconduct*
- *H2: Ph.D. students who are more influenced by business culture are more likely to be tolerant to misconduct*
- *H3: Ph.D. students who are more influenced by administrative culture are more likely to be tolerant to misconduct*

Variables and methods

- Dependent variable
 - Attitude towards scientific misconduct
- Independent variable
 - Academic culture: academic ambition, interest, capacity, instruction of norms...
 - Business culture: enterprise projects, concerning income in job seeking...
 - Administrative culture: tutor's administrative position, willingness to work in governmental sectors...
- Model: Ordinal logistic regression

Students with higher academic ambition tend to be less tolerant

Those who concerns more about income when seeking jobs tends to be more tolerant

If the tutor had higher academic and administrative position, the student are more likly to be tolerant

Students who were taught integrity norms by teachers are less tolerant

Those who worked in enterprise projects during PHD study are more tolerant

The students that are willing to work in government sectors after graduation tend to be more tolerant

	B	S.E	Sig.
capacity	-.159	.099	.111
ambition	-.212	.071	.003
I3			
T27_6			
interest3	-.076	.071	.284
FAC1_1	.039	.061	.520
FAC2_1	-.107	.057	.059
FAC3_1	-.001	.061	.981
[tutor=1.00]	.281	.170	.098
[tutor=2.00]	.084	.143	.560
[tutor=3.00]	.030	.154	.848
[tutor=4.00]	0 ^a		
[I2=1]	.219	.128	.088
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Ordinal Logistic Regression

Conclusions

- Scientific misconduct is “embedded” in the scientific culture
- Change of scientific culture led to anomie, including misconducts
- Social and cultural source of misconduct should be further studied

Thanks

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