

# Competition and cheating: Investigating the role of moral awareness, moral identity, and moral elevation

Vadera, Abhijeet K., and Chandra Shekhar Pathki

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# CONTENTS



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- Overall Introduction
- Empirical Study
- Further Discussion



# PART 1: Introduction

- Authors
- Focus
- Conception
- Framework

# Introduction - Authors



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## Abhijeet K. VADERA

- Associate Professor of OBHR
- Lee Kong Chian School of Business,  
Singapore Management University



More information:

<https://faculty.smu.edu.sg/profile/vadera-abhijeet-k-1586>.

[Vadera CV as of 06 14 2021 \(smu.edu.sg\)](#).

# Introduction - Core Focus



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- Effect of **competition** on **unethical behaviors**
- Investigating the role of **moral awareness**, **moral identity**, and **moral elevation**

# Introduction - Conception Clarification



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- **Competition**

- A win-lose aspect
- Rewards and evaluation

- **Cheating**

- Unethical acts
- Create an unfair advantage for the actor

- **Desire to win**

- Arousal theories of competition
- Path: competitive pressure → physiological arousal → motivation towards beating competition even at a high cost

- **Moral awareness**

- Social cognitive theory
- Path: external information → encoding → perceivers' mind
- pays attention to incoming information and categorizes it as a **moral issue**
- Bounded attention → bounded ethicality (failure to process social information)



- **Moral identity**

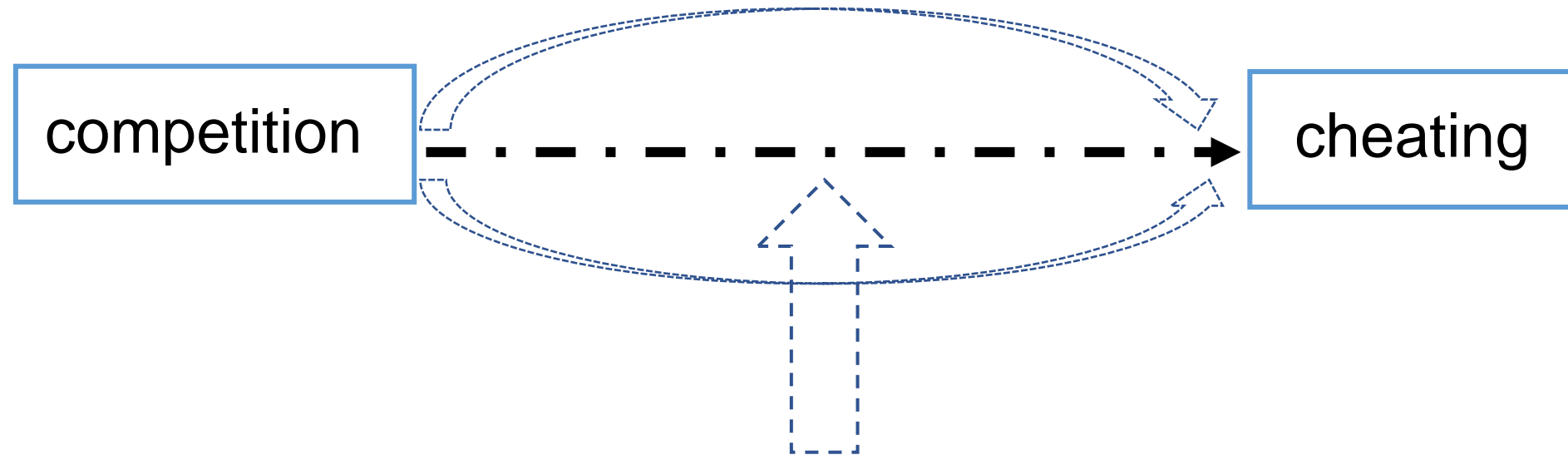
- Internal factor
- personal moral standards

- **Moral elevation**

- External factor
- individuals' attention is redirected outwards



# Introduction - Framework



- Whether competition affects cheating
- Why competition affects cheating
- How competition affects cheating



# PART 2: Empirical Study

- Experiments
- Field Study

# Experiments - Overview 1



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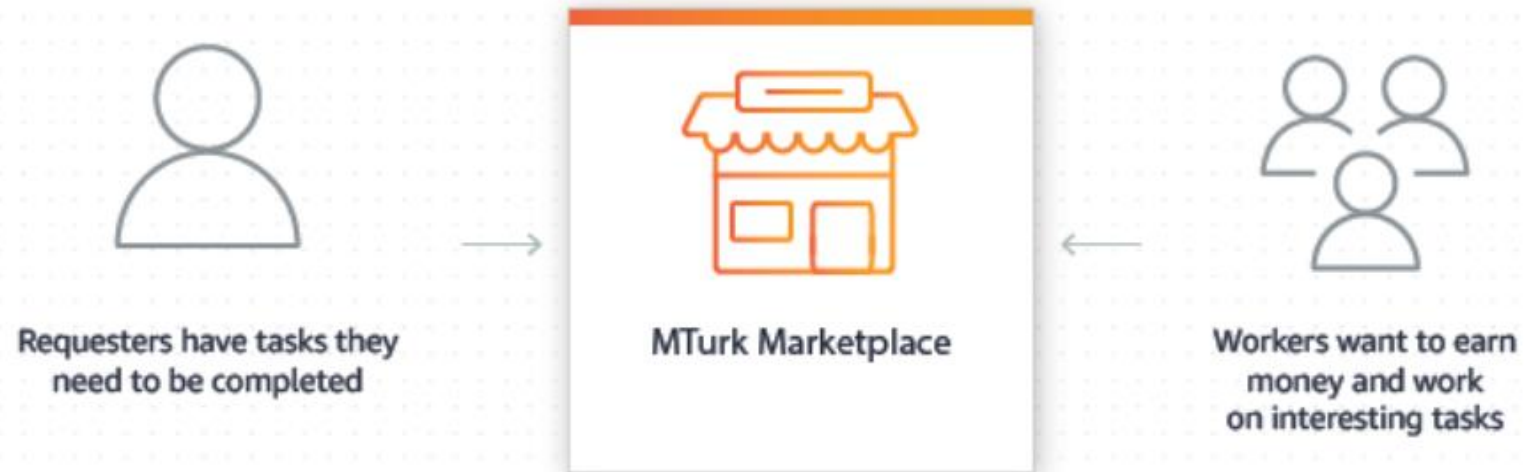
	purpose	location	subjects	size	treatment	measure of competition	measure of cheating	desire to win	moral awareness
<b>Study 1</b>	whether competition affects cheating	<a href="#">Mechanical Turk</a> (online) US	mostly educated working adults	71	low-high competition	10/30 *1 v.s. 3/30*4 manipulation check	<a href="#">sum of response for unsolvable questions</a>	/	/
<b>Study 2A</b>	how competition affects cheating	Mechanical Turk(online) US	mostly educated working adults	208	low-high competition	30/60*.5 v.s. 3/60*5 manipulation check	<a href="#">Gap between the actual and stated number</a>	1. I will do whatever it takes to win this competition. 2. I will do whatever it takes to get the rewards from this assignment.	1. There are very important ethical aspects of this assignment 2. This task clearly does not involve ethics or moral issues and 3,4 <a href="#">empirical analysis</a>

# Experiments - Study 1



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## Mechanical Turk



[back](#)

# Experiments - Study 1



## • Measure of cheating

Below are sample questions from 6th grade textbook test banks on the topics of history and algebra. The questions are rather simplistic, but even so they provide an option for honest but uneducated students to mark “I do not know.”

We have hypotheses about the effects of having an “I do not know” option on these questions. It is difficult to test the hypotheses with educated adults, but in the event that you are unable to solve or answer any of the following questions, please feel free to indicate so by marking “I do not know.”

- one out of 5 question was unsolvable with nonsense words and symbols
  - what is the capitol of Kazhindstan?
  - $(3X - 5)\varphi = 13; X = ?$

More specific instructions see:

[The role of moral knowledge in everyday immorality: What does it matter if I know what is right?](#).

# Experiments - Study 2A



- **Measure of cheating: prisoner's dilemma**

You were recently promoted to head the Central American tour division, one of the most important divisions of the Roving Tours Company. This division has a big impact on the rest of the company and you are being reminded to make sure you increase profits as much as possible. In order to increase profits, it is necessary to maximize the number of tours Roving Tours runs.

However, a competing company, Wandering Tours, also operates at the same Central American location. If both companies increase their tours to this location, this will make the location less exotic. Therefore, the ideal outcome would be if your competitor ran the least tours possible, while you ran the maximum number of tours.

# Experiments - Study 2A



- Measure of cheating: prisoner's dilemma

		Responder: Number of tours						
Your number of tours		7	6	5	4	3	2	1
7	7	6	8	10	12	14	16	18
6	6	5	7	9	11	13	15	17
5	5	4	6	8	10	12	14	16
4	4	3	5	7	9	11	13	15
3	3	2	4	6	8	10	12	14
2	2	1	3	5	7	9	11	13
1	1	0	2	4	6	8	10	12



# Experiments - Study 2A



- Measure of cheating: prisoner's dilemma

		Sender: Number of tours						
Your number of tours		7	6	5	4	3	2	1
7	7	6	8	10	12	14	16	18
6	6	5	7	9	11	13	15	17
5	5	4	6	8	10	12	14	16
4	4	3	5	7	9	11	13	15
3	3	2	4	6	8	10	12	14
2	2	1	3	5	7	9	11	13
1	1	0	2	4	6	8	10	12

More specific instructions see:  
[Conflict Frames and the Use of Deception: Are Competitive Negotiators Less Ethical?](#)

[back](#)



# Experiments - Study 2A



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- **Cheating: the difference between the actual and stated number of tours**
  - the number sender would **actually** run the following season
  - the number sender would **report** to the receiver
  - Note: the receiver would be only informed of the **indicated** information

[back](#)

- **Mediating effects: theoretical framework**

- Estimation of the direct and indirect effects in such a model requires  $k$  models of  $M$  from  $X$

$$M_j = i_{M_j} + a_j X + e_{M_j}$$

- a single model of  $Y$  which includes all  $k$   $M$  mediators plus  $X$  as predictors

$$Y = i_Y + c'_1 X + \sum_{j=1}^k b_j M_j + e_Y$$

- Direct effects v.s. indirect effects

More technical details see:

[PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling.](#)

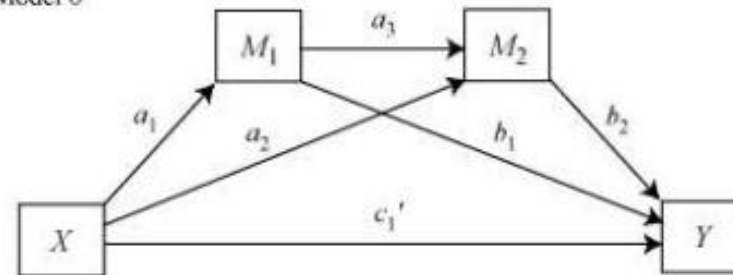
[back](#)

# Experiments - Study 2A



- **Mediating effects: empirical verification**
  - Competition **impaired moral awareness**, which explained why people cheated.
  - In contrast, the desire to win did not mediate these effects.
- Possibility of serial mediation?

PROCESS Model 6



More technical details see:

[PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling.](#)

# Experiments - Study 2A



- Possibility of effects of procedure sequence?
  - Measure the mediating variable **before** providing the opportunity to cheat.

	purpose	location	subjects	size	treatment	measure of competition	measure of cheating	desire to win	moral awareness
<b>Study 2A</b>	how competition affects cheating	Mechanical Turk(online) , US	mostly educated working adults	208	low-high competition	30/60*.5 v.s. 3/60*5 manipulation check	gap between the actual and stated number	1~7 scale items 1. I will do whatever it takes to win this competition. 2. I will do whatever it takes to get the rewards from this assignment.	1. There are very important ethical aspects of this assignment 2. This task clearly does not involve ethics or moral issues and 3, 4
<b>Study 2B</b>	test the effect of sequence of procedure	Mechanical Turk(online) , US	mostly educated working adults	83	low-high competition	10/30*1 v.s. 3/30*4 manipulation check	<u>spending more than 90s on the task</u>		

# Experiments - Study 2B



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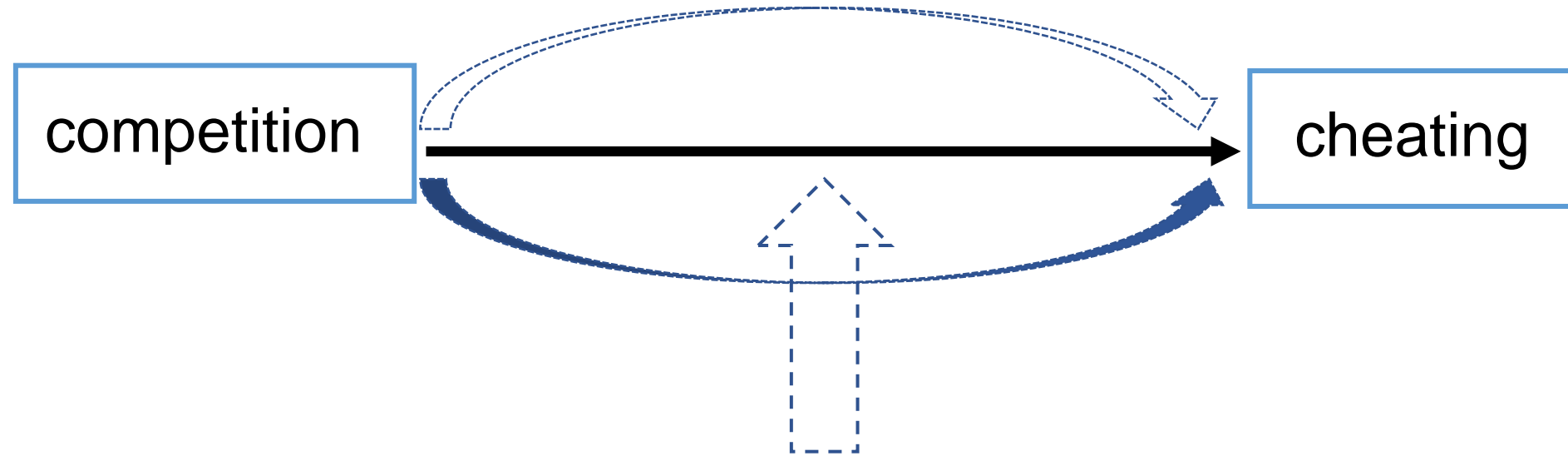
- **Measure of cheating**

- 5 matrices with 4 rows and 5 columns of 3-digit numbers
- Find 2 numbers in each matrix that summed to 10
- asked them to not spend more than 90 s, but it is not compulsory  
i.e. the browser did not automatically close after 90s.

- **Experimental result**

- Consistent with the above-mentioned studies
- again found support for the mediating effects of impaired moral awareness, but not of desire to win

More specific instructions see:  
[The hungry thief: Physiological deprivation and its effects on unethical behavior](#).



- ✓ Whether competition affects cheating
- ✓ Why and how competition affects cheating  
→→Moderating effect?

# Experiment - Study 3



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	purpose	location	subjects	size	treatment	measure of competition	measure of cheating	moral identity	moral elevation
Study 3A	test the moderating effect of social identity on competition-cheating relationship	India	MBA students	105	low-high competition	40/105*2 v.s. 4/105*20	<u>gap between the actual and stated performance</u>	5 items from internalization scale(1_7points)	/
Study 3B	test the moderating effect of social identity on competition-cheating relationship	India	employees	100 (in pairs)	low-high competition	3 items capturing competitive levels, "everybody in my organization is concerned with finishing at the top"	3 items to rate the frequency with which the focal employee engaged in various cheating behaviors	3 items from deviance scale	/

# Experiments - Study 3A



- **Measure of cheating**

- 20 matrices with 4 rows and 5 columns of 3-digit numbers
- Find 2 numbers in each matrix that summed to 10
- 6 min to find the numbers
- Correct answers would be presented after 6 min on the screen
- After self-evaluating, hand in **the reporting slip** and **recycle the solution sheet**.
- **Cheating behavior: gap between self-reported and actual performance**



# Experiments - Study 3



	Dependent variable: Cheating			
	Model 1		Model 2	
Variables	B	SE	B	SE
Competition	.52	.30	.53	.30
Moral identity	-.59**	.20	.04	.30
Competition × moral identity			-1.09**	.39
R <sup>2</sup>	.10**		.17**	
ΔR <sup>2</sup>			.07*	

Study 3A (n=105)

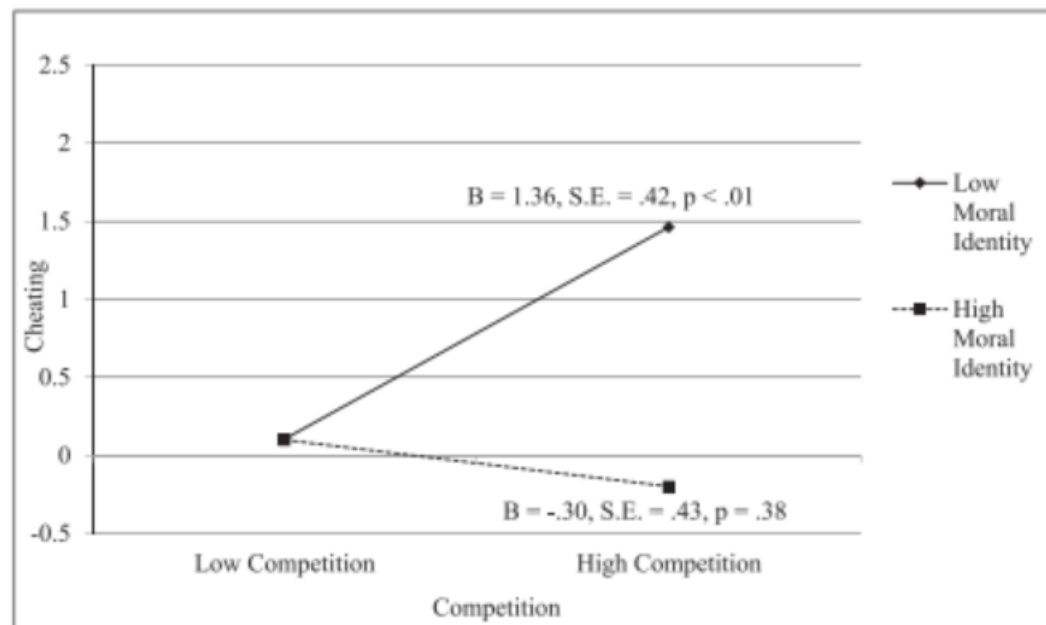
	Dependent variable: Cheating			
	Model 1		Model 2	
Variables	B	SE	B	SE
Competition	.11***	.06	.18*	.07
Moral identity	-.78*	.12	-.66*	.12
Competition × moral identity			-.30*	.08
R <sup>2</sup>	.35*		.43*	
ΔR <sup>2</sup>			.08*	

Study 3B (n=100)

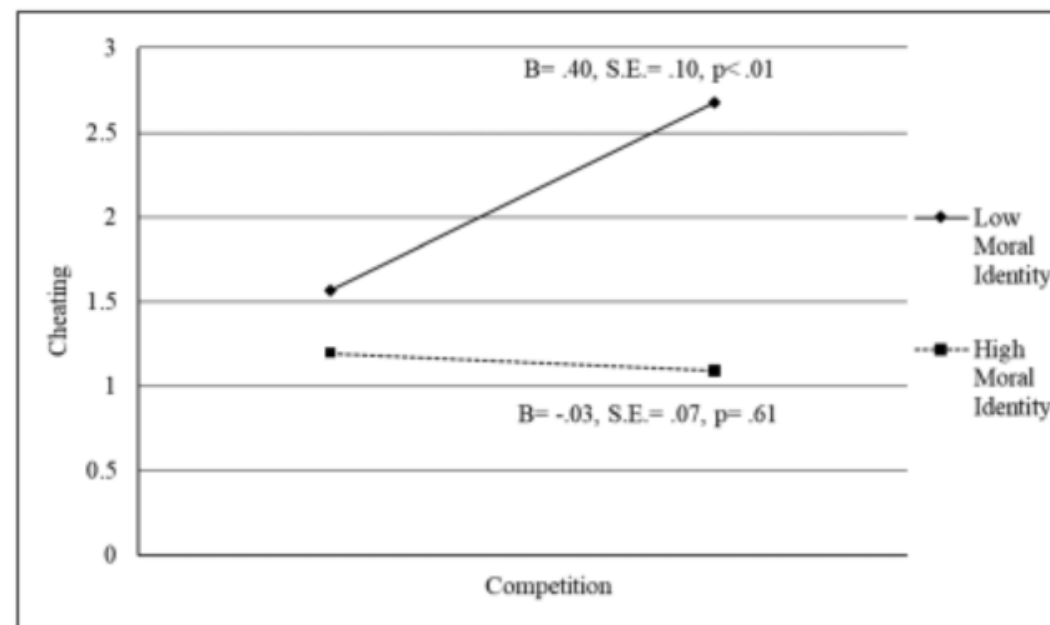
# Experiments - Study 3



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Study 3A (n=105)



Study 3B (n=100)

# Field - Study 4



	purpose	location	subjects	size	treatment	measure of competition	measure of cheating	moral identity	moral elevation
<b>Study 3A</b>	test the moderating effect of social identity on competition-cheating relationship	India	MBA students	105	low-high competition	40/105*2 v.s. 4/105*20	<a href="#">gap between the actual and stated performance</a>	5 items from internalization scale(1_7points)	/
<b>Study 3B</b>	test the moderating effect of social identity on competition-cheating relationship	India	employees	100 (in pairs)	low-high competition	3 items capturing competitive levels, "everybody in my organization is concerned with finishing at the top"	3 items to rate the frequency with which the focal employee engaged in various cheating behaviors	3 items from deviance scale	/
<b>study 4</b>	test the moderating effect of social elevation on competition-cheating relationship	India	MBA students	257	2x2 design low-high competition; low-high moral elevation	40/257*2 v.s. 4/257*20	gap between the actual and stated performance	/	video-evaluation check; scale items for 3-dimension components

# Field · Study 4



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- **Moral elevation**

- External factor
- individuals' attention is redirected outwards
  - Emotional component
  - View of humanity
  - Desire to be a better person

# Field · Study 4



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- **Problem-solving task**

- Manipulate competition and assess cheating

- **Video evaluation task**

- Manipulate moral elevation
- High moral elevation treatment: the child inspired others to help move the tree
- Low moral elevation treatment: young adults were burning chairs

# Field · Study 4



- **Moral elevation manipulation check**

- Emotional component
  - “I felt compassionate after watching the video”
- View of humanity
  - “People are really good”
- Desire to be a better person
  - “I need to do more to help other people”

# Field · Study 4

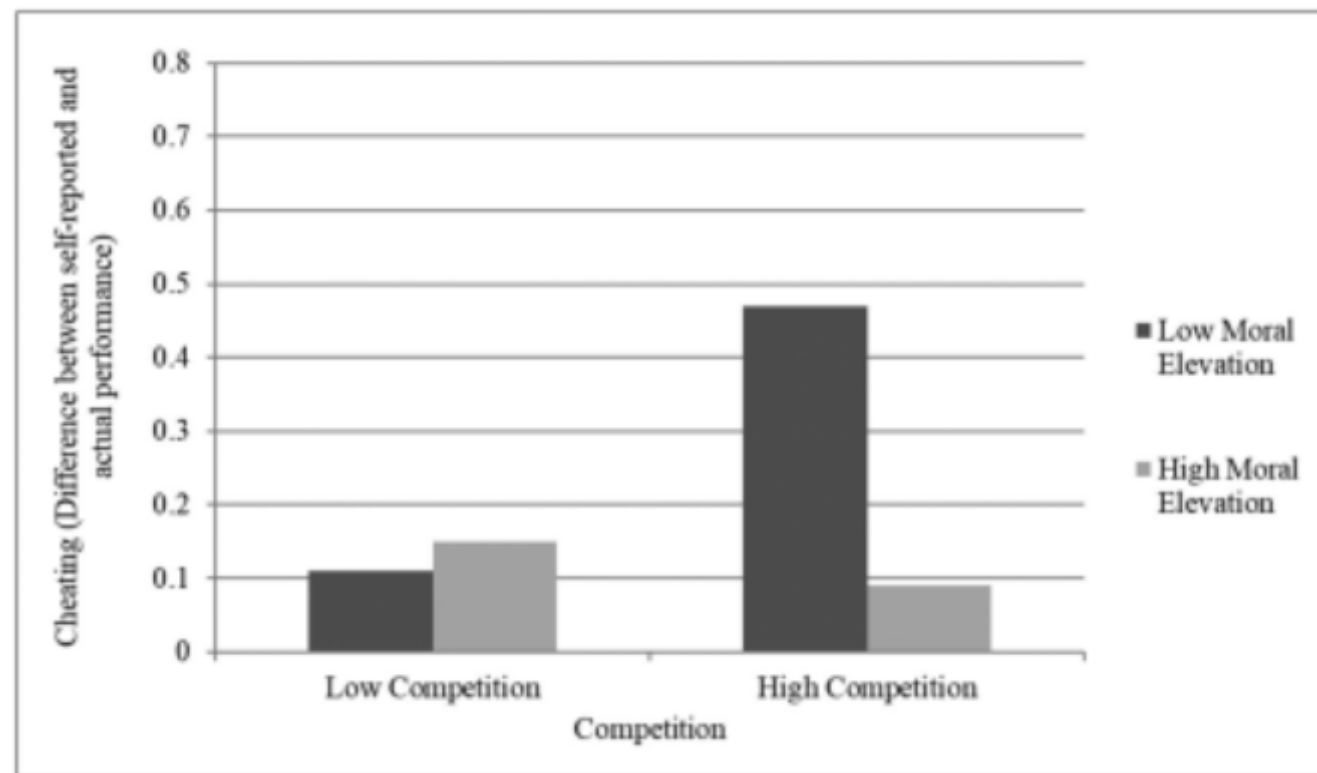


- **Moral elevation manipulation check**
  - Emotional component
    - “I felt compassionate after watching the video”
  - View of humanity
    - “People are really good”
  - Desire to be a better person
    - “I need to do more to help other people”

# Field · Study 4



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Study 4

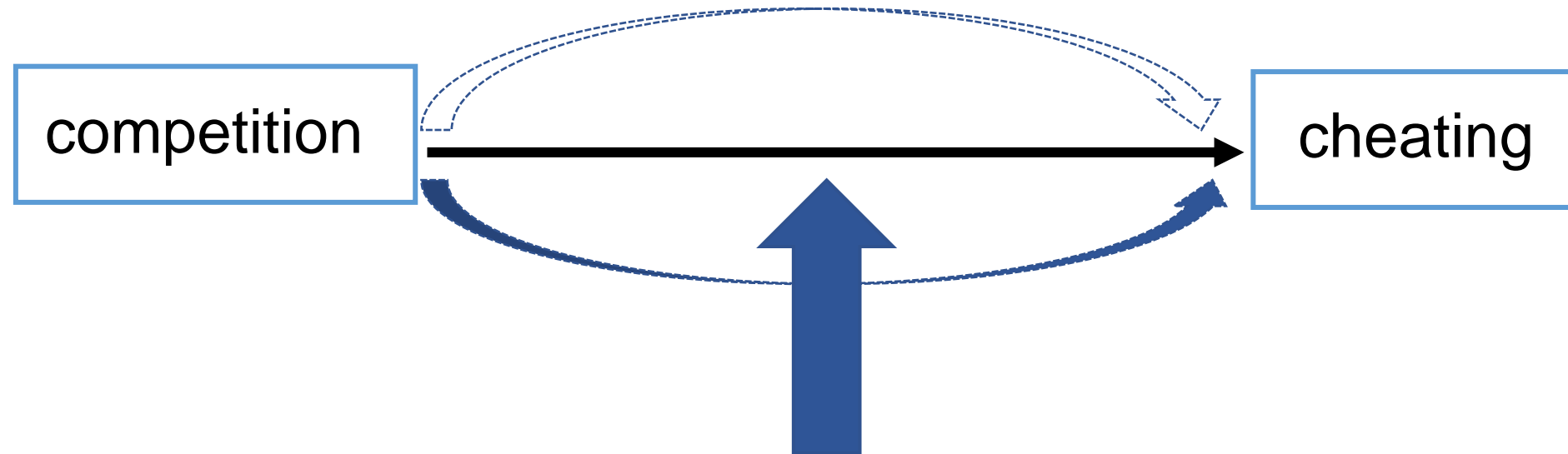
Interaction effects of competition and moral elevation on cheating



# Experiments and Field Study



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- ✓ Whether competition affects cheating
- ✓ Why and how competition affects cheating
- ✓ Moderating effect: moral identity and moral elevation



# PART 3: Further Discussion

- Conclusion
- Future directions



- **Why competition affects cheating?**
  - **Moral awareness impairment** instead of desire to win explains why people cheat in competition.
- **How competition affects cheating?**
  - **Moral identity** and **moral elevation** both weaken the detrimental effects of competition on cheating.



- **Casual inference of moderating effect ?**
- Unethical behavior v.s. mistaking behavior ?
- Other measurements for cheating behavior?
- **Competition, relative rank and cheating behavior**

# Thanks for listening :)

