UNIVERSITY OF ALBERTA
WIRTH INSTITUTE FOR AUSTRIAN AND CENTRAL EUROPEAN STUDIES

CENTRAL EUROPEAN TALKS 2019

THURSDAYS @ 3:00PM, SENATE CHAMBER
ARTS & CONVOCATION HALL

MAR 2 - ZSOLT MIKLÓSVÖLGYI

PHD CANDIDATE IN LITERARY AND CULTURAL STUDIES, PÁZMÁNY PÉTER CATHOLIC UNIVERSITY, BUDAPEST

VISIONS AND MIMICS: INTERWAR ARCHITECTURAL MODERNISM IN BUDAPEST

MAR 9 - EWA ZAWOJSKA

PHD CANDIDATE IN ECONOMICS, UNIVERSITY OF WARSAW, POLAND

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

MAR 16 - MARINA PRAŽETINA

PHD CANDIDATE AT THE UNIVERSITY OF ZAGREB, CROATIA

TRUSTWORTHY SCIENCE FOR POLICY: AVOIDING BIASES AND MISLEADING INFORMATION

MAR 23 - ONDŘEJ HAVÁČ

PHD CANDIDATE AT THE FACULTY OF ARTS, MASARYK UNIVERSITY, CZECH REPUBLIC

THE IDENTITY IN EXILE: THE CONSTRUCTION OF CZECH NATIONAL IDENTITY IN LIFE-STORIES OF THE POST-PRAGUE SPRING REFUGEES

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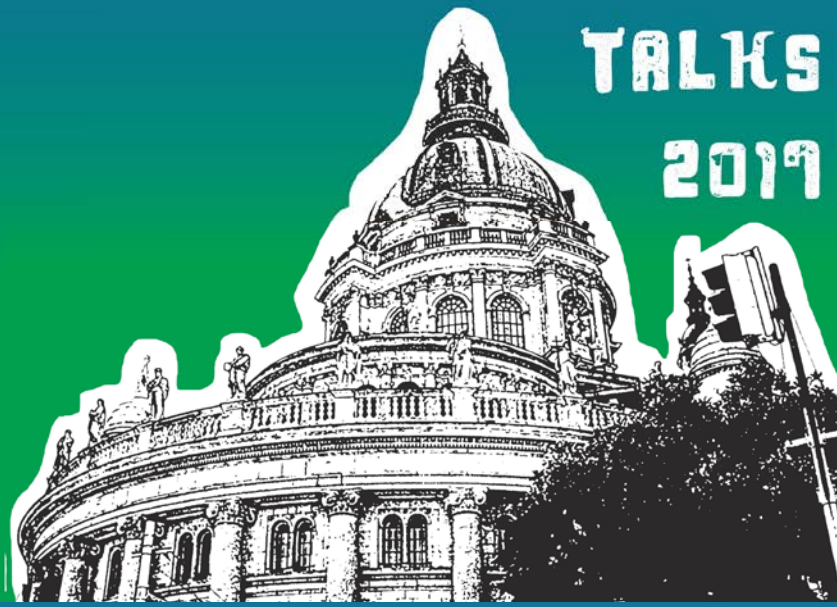

MAR 9 - EWA ZAWOJSKA

PHD CANDIDATE IN ECONOMICS, UNIVERSITY OF WARSAW, POLAND

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

How to measure economic benefits from public goods

1. Individuals cannot be excluded from the use of these goods
2. The use of the goods by one individual does not reduce availability the goods to others

Examples: fresh air, biodiversity, street lighting

Benefits expressed in terms of money

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

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WHY

~~HOW~~ TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

WHY

~~HOW~~ TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

1. Cost-benefit analysis of public policies
2. Litigation over environmental damages

Deepwater Horizon oil spill

- 20th April 2010 – an explosion on BP’s drilling platform
- 134 million gallons of oil spilled into the Gulf of Mexico (For non-Americans: 507 million liters)
- The largest offshore oil spill in U.S. history

Deepwater Horizon oil spill

- Injuries to natural resources: fish, birds, turtles, marine mammals, their habitats, nearshore ecosystems
- Lost human uses of these resources: recreation, fishing, hunting
- …

- Restoration needed to address impacts from the spill:
  - to return the Gulf to the before-the-spill condition
  - to compensate the public for lost natural resource services

Deepwater Horizon oil spill

- How much should BP pay the public / government?
- To compensate the public, we need to know how the public value the losses.
- What is the value of the lost natural resource services?

Deepwater Horizon oil spill

- How much should BP pay the public / government?
- To compensate the public, we need to know how the public value the losses.
- What is the value of the lost natural resource services?

- So we come back to the issue:

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

How did they do that in the Deepwater Horizon case?

3,656 in-person interviews on a nationally representative sample of the adult population

The only way to prevent the effects of the next spill would be to put a second pipe in place at the same time that the first pipe is drilled.

"Prevention Program": The government pays to put a second pipe in each new well that will be drilled in the Gulf.

Do you vote for or against the "Prevention Program", which will cost you the onetime tax of $135?

FOR / AGAINST

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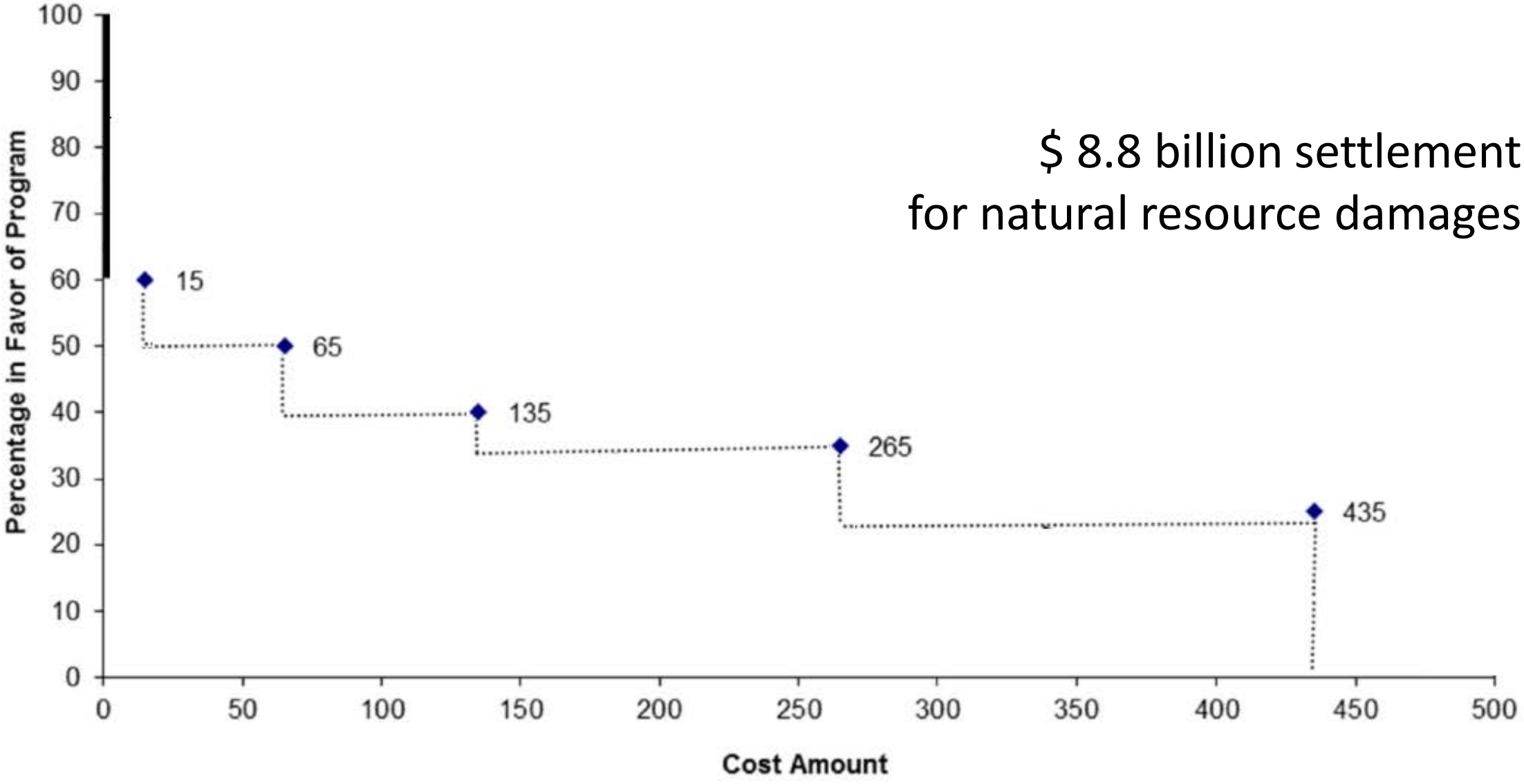
Do you vote for or against the "Prevention Program", which will cost you the onetime tax of $135?

FOR / AGAINST

Bid levels: $15, $65, $135, $265, $435

Survey results: Willingess-to-pay distribution



$ 8.8 billion settlement
for natural resource damages

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

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Stated preference methods

Stated preference methods

- Used to determine public's preferences, especially towards public goods
- Survey-based – in specially designed surveys respondents state what they would do
- Flexible – enable valuation of hypothetical states
- Important for cost-benefit analysis – allow to estimate the benefits

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But much scepticism whether survey responses reflect actual preferences

- Surveys are often (seen as) hypothetical
- Lack of economic-based incentives to answer a survey truthfully
- Empirical evidence on hypothetical bias
- Strategic voting

CORRECTLY

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

CORRECTLY

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

How to incentivise respondents to state their preferences truthfully?

How to incentivise respondents to state their preferences truthfully?

Theory suggests…

- The survey should be perceived as consequential:
  - Respondents care about the good being valued.
  - Respondents believe that their responses will affect the final decision of the authority. (Policy consequentiality)
  - Respondents view that the authority can enforce the payment. (Payment consequentiality)
- The survey should involve a yes-no question on a single project.

But how important are these issues in actual, field surveys?

What have I done to answer my PhD research question?

1. A literature review study about available research testing validity of stated preference methods
2. A study on the role of survey consequentiality for truthful preference elicitation
3. A study on the roles of policy consequentiality and payment consequentiality
4. A study on differences in stated preferences in surveys using two- versus three-option formats

1. A literature review study about available research testing validity of stated preference methods

- A large body of research assessing hypothetical bias
- Mixed evidence
- But when we limit evidence to studies that properly incentivise respondents to reveal their preferences…
- A clear finding: stated preference methods are valid!
- (That is, respondents disclose their true preferences.)

2. A study on the role of survey consequentiality for truthful preference elicitation

- Context: Cheap tickets to municipal theatres in Warsaw, Poland

	Program	No change
Entertainment theatres	No change	No change
Drama repertory theatres	Tickets for 5 PLN	No change
Children's theatres	No change	No change
Experimental theatres	Tickets for 5 PLN	No change
Annual cost for you (tax)	100 PLN	0 PLN
Your choice	☐	☐

- Differences in consequentiality communicated in survey scripts
- "Do you think that your choices in the survey will influence future decisions regarding financing municipal theatres in Warsaw?"

2. A study on the role of survey consequentiality for truthful preference elicitation

- Consequentiality perceptions affect stated preferences.

  The survey perceived as more consequential ⇨ *More support for the proposed program*

- Communicated consequentiality affects stated preferences.

- Communicated consequentiality has no effect on consequentiality perceptions.
  - *Can researchers affect perceptions over consequentiality?*
  - *Poor survey scripts to influence consequentiality beliefs?*
  - *Poor measures of consequentiality perceptions?*

3. A study on the roles of policy consequentiality and payment consequentiality

- Context: Development of renewable energy sites

	Wind energy	Biomass energy	Solar energy	I am indifferent
Distance of an energy site from residential areas	600 m	2500 m	300 m	900 m
Size of an energy site	Large	Large	Small	Medium
Type of energy transmission lines	Underground	Underground	Overhead	Overhead
Change in the electricity bill per month	+30 PLN	-10 PLN	+30 PLN	0 PLN
My choice	□	□	□	□

3. A study on the roles of policy consequentiality and payment consequentiality

- Policy consequentiality:
  “The project of development of renewable energy infrastructure will indeed be conducted in Poland in the next five years.”
- Payment consequentiality:
  “For the purpose of development of renewable energy infrastructure, the electricity bill will indeed change in the next five years.”
- Five-degree scale
  from “I definitely agree” to “I definitely disagree”

3. A study on the roles of policy consequentiality and payment consequentiality

- Those believing in policy consequentiality prefer changes to the current state (prefer the project implementation) more than those believing in payment consequentiality.
- Those believing in payment consequentiality state significantly lower willingness to pay for the project than those believing in policy consequentiality.

4. A study on differences in stated preferences in surveys using two- versus three-option formats

- Context: Improvement of tap water quality in Milanówek, Poland

	No change	Option 1	Option 2
Iron	As today 	50% lower 	75% lower 
Hardness	As today 	50% lower 	33% lower 
Chlorine	As today 	80% lower 	As today 
Additional cost per month for your household	0 zł	10 zł	70 zł
Your choice	☐	☐	☐

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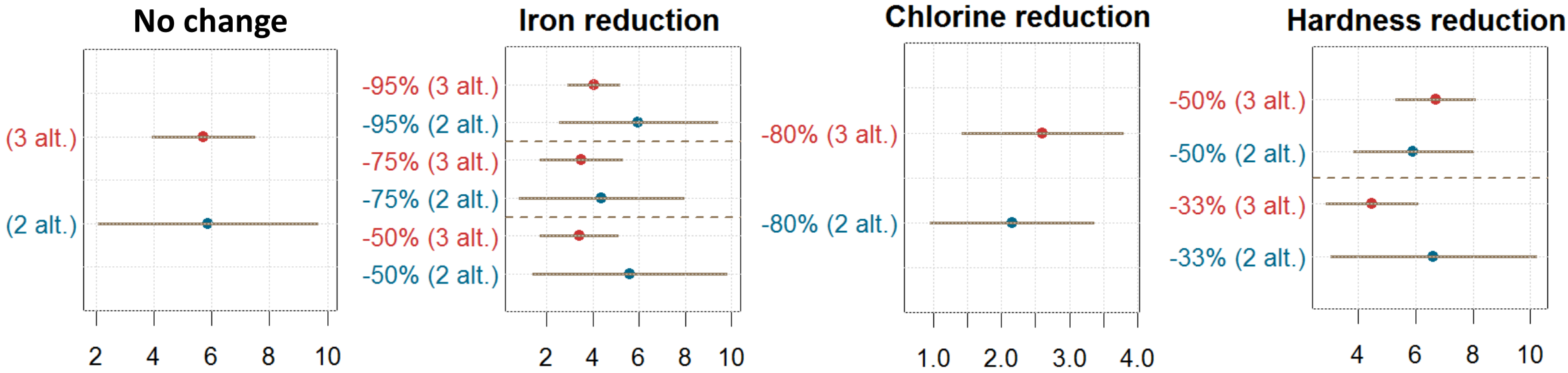
4. A study on differences in stated preferences in surveys using two- versus three-option formats

Mean willingness-to-pay estimates with 95% confidence intervals [EUR]



- The intervals for each attribute overlap. => No significant differences in preferences
- Narrower intervals for the three-option-based estimates. => More precise estimates

4. A study on differences in stated preferences in surveys using two- versus three-option formats

- Three-option format preferred
- Lack of strategic preference misrepresentation
  - *Too complex choice tasks?*
  - *Uncertainty about others' preferences?*

CORRECTLY

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

- Assure that a survey is perceived as consequential
- Control for respondents' perceptions over policy / payment consequentiality
- The condition on a survey format appears of lesser importance

Thank you!
Dziękuję!