



When Reverse-Oriented Item Formats are Not Polar Opposites: An Experiment Comparing Attitudinal Responses when Asking if Abortion Should be Legal vs Illegal

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Item Wording Impacts

- Reverse-oriented questions are not necessarily contradictory [Salazar, 2015; Spector et al., 1997; Tourangeau & Rasinski, 1988; Vigil-Colet, et al., 2020; Weijters, Baumgartner, & Schillewaert, 2013]
 - For example, consider the statements:
 - I am happy.
 - I am unhappy. [I am sad.]



General Social Survey Abortion Question Wording

Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion, if:

Yes
No
[Don't know]



Item Wording Impacts

Do people have the same thought process and response outcome if asked:

- Should abortion be legal?
- Should abortion be illegal?



Item Response Impacts

- Responses to items can be impacted by factors such as:
 - Acquiescence (tendency to agree)
 - Primacy (early response options in a list)
 - Social desirability
 - Cognitive difficulty
 - Inattentiveness (or careless responding)



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Sample

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Illegality and Punishment Study (2020-2021)

Qualtrics© (Web-based opt-in panel)

- $N_{\text{total}} = 3,321$ (2,627 English; 694 Spanish)
- $N_{\text{analytical}} = 2,204$ English (84%) retained as analytical sample
 - reCAPTCHA item
 - response time > 1/3 of median response time of pilot sample
 - attention check item

Quota Variables

- Gender (49.5% men, 49.5% women, 1% other)
- Age (18-24 yrs - 12.8%, 25-34 yrs - 17.7%, 35-44 yrs - 16.7%, 45-54 yrs - 17.7%, 55-64 yrs - 16.4%, 65 yrs+ - 18.8%)
- Race/Ethnicity (White - 25%, Black/African American - 25%, Hispanic - 25%, other - 25%)
- Political Party (Democrat - 30%, Republican - 30%, Independent - 30%, other - 10%)





Experimental Assignment

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Illegality Experiment Question Wording

Do you think it should be **legal** for a woman to obtain an abortion in the following circumstances?

Do you think it should be **illegal** for a woman to obtain an abortion in the following circumstances?

Definitely yes
Probably yes
Unsure
Probably no
Definitely no



Question Wording and Order of Item Sets

Experimental Condition 1: Legal-Illegal

Do you think it should be **legal** for a woman to obtain an abortion in the following circumstances?



Do you think it should be **illegal** for a woman to obtain an abortion in the following circumstances?

$n = 1,106$

Experimental Condition 2: Illegal-Legal

Do you think it should be **illegal** for a woman to obtain an abortion in the following circumstances?



Do you think it should be **legal** for a woman to obtain an abortion in the following circumstances?

$n = 1,098$



Circumstances

Health-Related	Socioeconomic
If there is a strong chance of serious defect in the baby?	If she is married and does not want any more children?
If the woman's own health is seriously endangered by the pregnancy?	If the family has a very low income and cannot afford any more children?
If she became pregnant as a result of rape?	If she is not married and does not want to marry the man?
If the woman believes that the abortion is necessary for her mental health?	If they were using contraception but it failed?
If the woman believes that the abortion is necessary for her physical health?	If the woman became pregnant because the man refused to wear a condom?
If the couple is concerned about passing on a genetic disease?	If the baby is a different gender than the parents desired?



Design

Outcomes

- Composite score for Health-Related circumstances
- Composite score for Socioeconomic circumstances

Between Group Condition (Wording Effect - initial format assignment)

- Legal wording format
- Illegal wording format (reverse coded)

Within Group Condition (Order Effect - differences within groups on the two formats)

- Legal first, Illegal second (reverse coded)
- Illegal first (reverse coded), Legal second

Analyses

- One between, one within repeated measures (separately for health-related and socioeconomic outcomes)

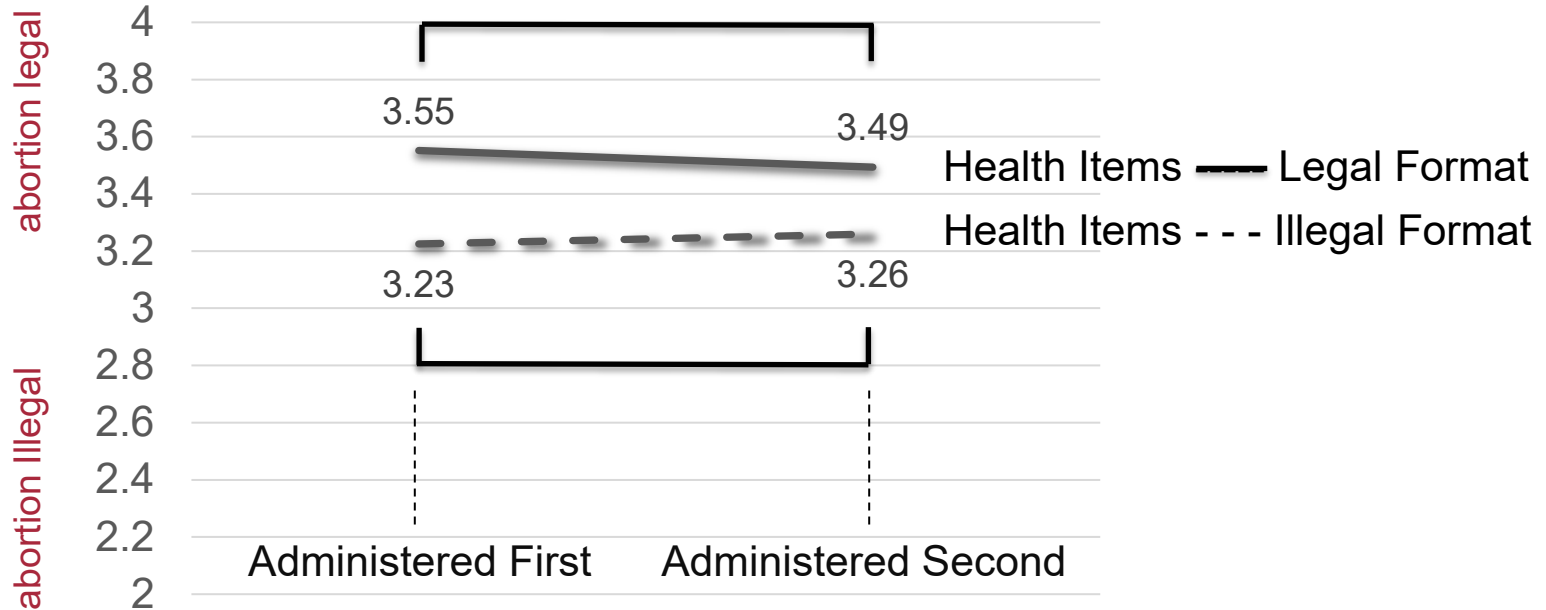


Results

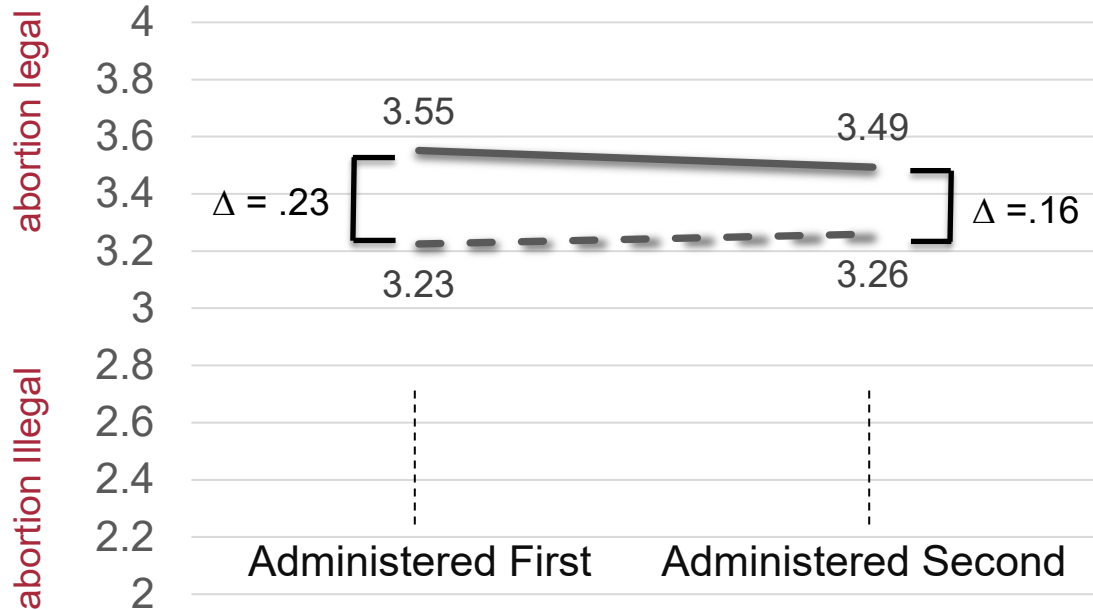
	Health-Related Circumstances
Interaction of Wording by Order Effects	$F(1, 2202) = 0.155, p = .694;$ $\eta_p^2 = .000$
Order Effect	$F(1, 2202) = 1.176, p = .278;$ $\eta_p^2 = .001$
Wording Effect (legal vs illegal)	$F(1, 2202) = 96.624, p < .001;$ $\eta_p^2 = .042$



Question Wording and Order of Item Sets



Question Wording and Order of Item Sets



Health Items — Legal Format
Health Items - - - Illegal Format

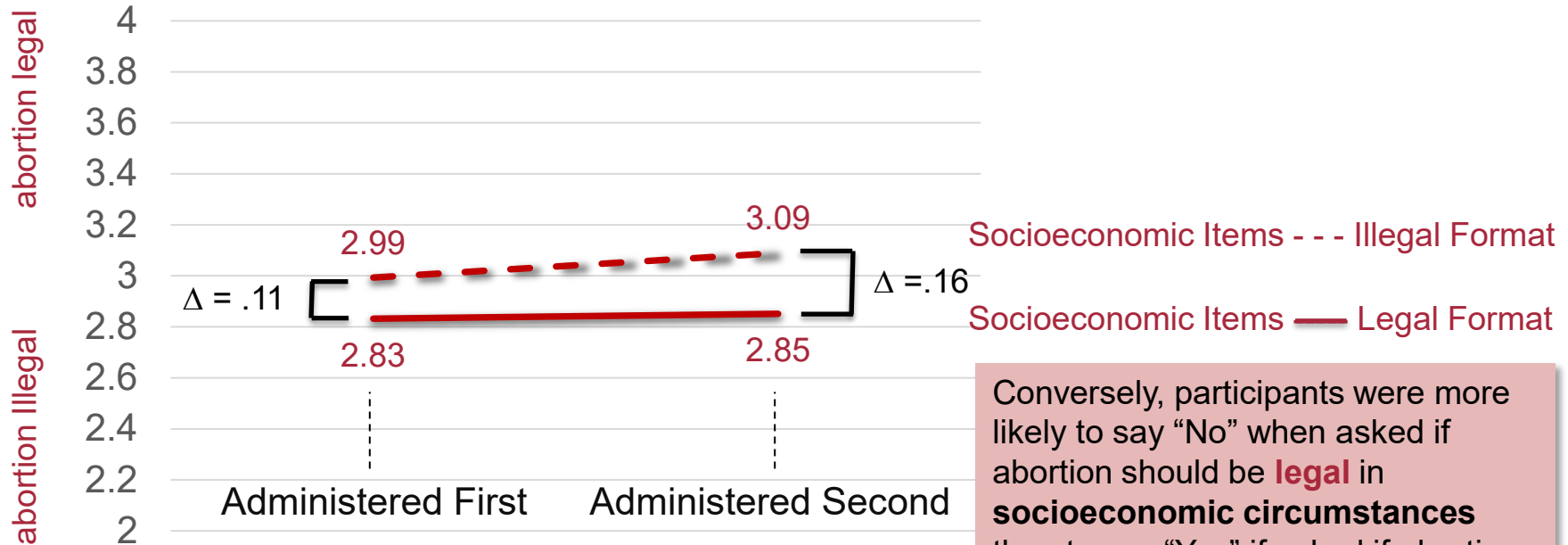
Participants were more likely to say “Yes” when asked if abortion should be **legal** in **health-related circumstances** than to say “No” if asked if abortion should be **illegal**.

Results

	Health-Related Circumstances	Socioeconomic Circumstances
Interaction of Wording by Order Effects	$F(1, 2202) = 0.155, p = .694;$ $\eta_p^2 = .000$	$F(1, 2202) = 3.502, p = .061;$ $\eta_p^2 = .002$
Order Effect	$F(1, 2202) = 1.176, p = .278;$ $\eta_p^2 = .001$	$F(1, 2202) = 0.713, p = .399;$ $\eta_p^2 = .001$
Wording Effect (legal vs illegal)	$F(1, 2202) = 96.624, p < .001;$ $\eta_p^2 = .042$	$F(1, 2202) = 44.102, p < .001;$ $\eta_p^2 = .019$



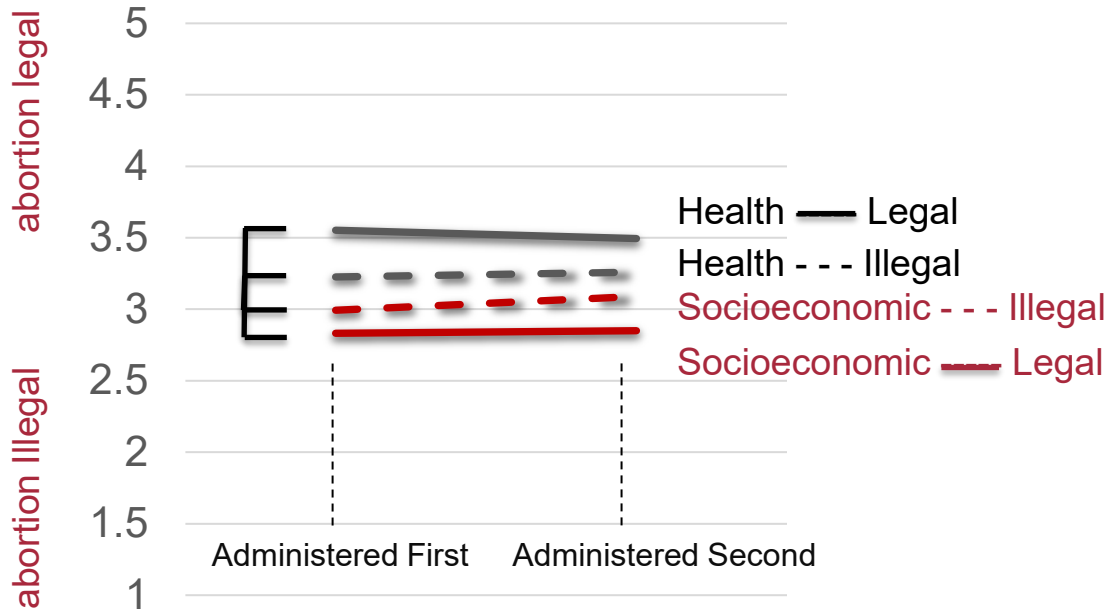
Question Wording and Order of Item Sets



Conversely, participants were more likely to say “No” when asked if abortion should be **legal** in **socioeconomic circumstances** than to say “Yes” if asked if abortion should be **illegal**.



Question Wording and Order of Item Sets



Participants were more likely to say “Yes” when asked if abortion should be **legal** in **health-related circumstances** than to say “No” if asked if abortion should be **illegal**.

Conversely, participants were more likely to say “No” when asked if abortion should be **legal** in **socioeconomic circumstances** than to say “Yes” if asked if abortion should be **illegal**.

Impacts of Acquiescence and Primacy?

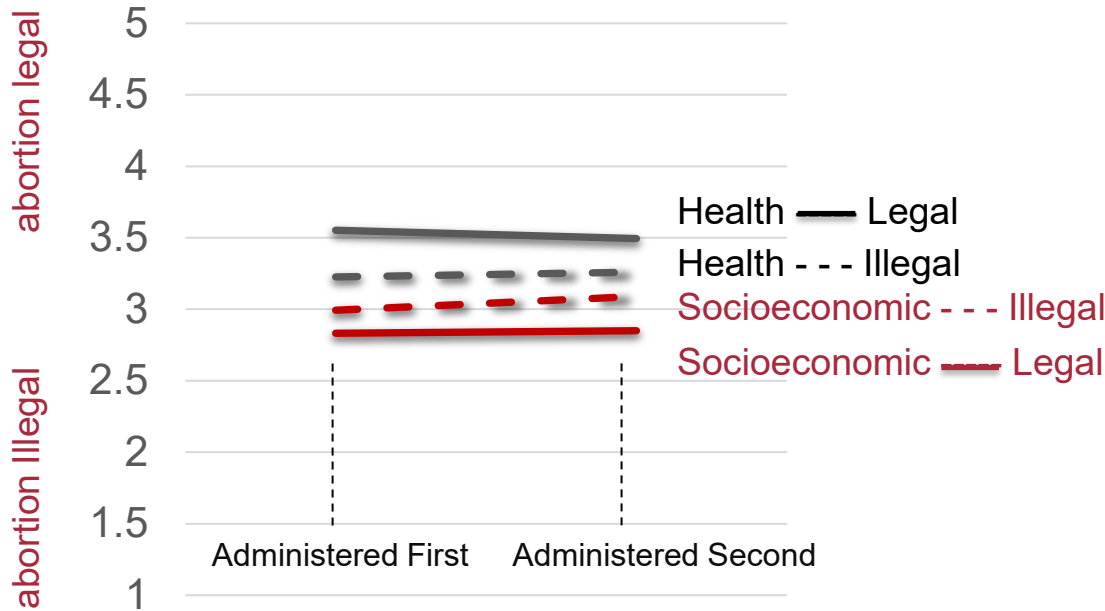
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Question Wording and Order of Item Sets



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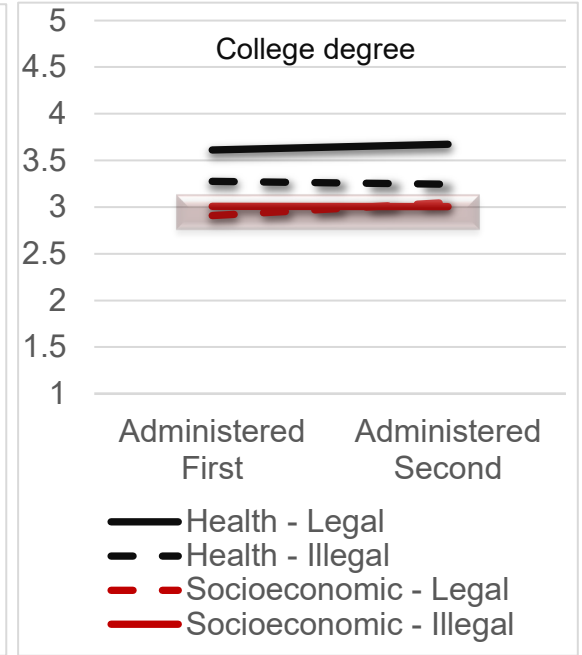
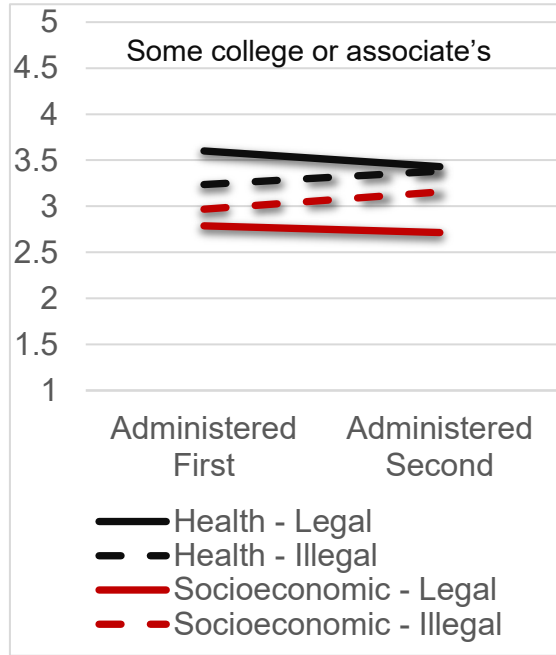
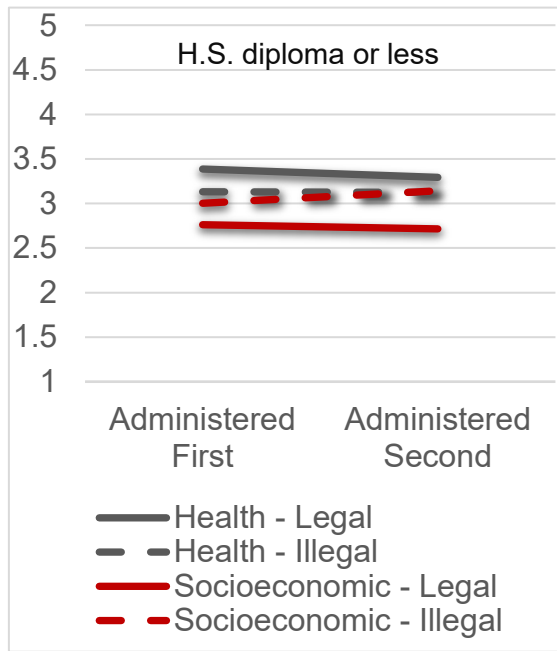


Does cognitive difficulty play a role in response outcomes with item wording?

Are these differences consistent across subgroups with different educational levels?

Comparisons by Educational Level

abortion illegal abortion legal





Summary

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Summary

The use of LEGAL vs ILLEGAL resulted in significantly different outcomes. Asking if abortion should be LEGAL resulted in larger differences between health and socioeconomic types of circumstances compared to when the ILLEGAL wording was used.



Summary

Acquiescence and primacy factors do not appear to account for the differences found in this study as both should have resulted in more supportive attitudes for abortion when the LEGAL format was used for both health and socioeconomic circumstances compared to the ILLEGAL format.



Summary

With similar results for participants of different educational levels, it does not appear that cognitive ability is a strong factor influencing responses.

- Results (significant differences) were similar for participant groups in all three educational levels for the health-related circumstances.
- Participants with a college degree exhibited similar responses across wording formats for the socioeconomic circumstances, but they had significant differences between the legal and illegal formats on the health-related circumstances. The effect size difference for this group was the largest on the health-related circumstances.



Summary

Difficult to understand which format more accurately describes people's attitudes about abortion.

- When asking about abortion in health-related circumstances, why are people more likely to say that abortion should be LEGAL than to say abortion should **not** be ILLEGAL in these circumstances?
- Further, in socioeconomic circumstances, why are people more likely to say that abortion should **not** be LEGAL than to say that abortion should be ILLEGAL?

Cognitive interviewing may be needed to better understand the differences in response patterns for legal vs illegal situational wording.





Thank you

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