La forme avant le fond?

LANCEMENT D'UN PROGRAMME DE RECHERCHE SUR L'EFFET DU FORMATAGE SUR LA PERCEPTION DES RÉSULTATS DE RECHERCHE

RFICS CIRST

Équipe

Équipe de rédaction

- Mathieu Ouimet (ULaval)
- Benoit Béchard (ULaval)
- Louis-Robert Beaulieu-Guay (RFICS-CIRST)

Axe recherche du RFICS

- François Claveau (UdeS)
- Matthieu Mondou (RFICS)
- Éric Montpetit (UdeM)
- Thierry Warin (HEC)

RFICS CIRST

Contexte

Objectifs

- Vérifier si différentes décisions de formatage peuvent affecter la perception qu'ont les lecteurs de la crédibilité de résultats de recherche
- Identifier des bonnes pratiques en communication et en conseil scientifique

Phases du projet

1. Mener une première expérience pour lancer le programme
2. Vérifier la robustesse de nos résultats (réplication)
3. Élargir nos constats aux fonctionnaires

Question de recherche

Quel est l’effet du formatage sur le traitement d’information?

Spoiler alert (divulgâcheur)!

1. Mettre en évidence des informations facilite leur traitement.
2. La présence d'image peut nuire à la compréhension d'information pertinente.

1ère expérience

Expérience par sondage

- Lecture d'une synthèse scientifique
- Questionnaire administré en ligne par Qualtrics

Participants.es

- 550 américains.nes ayant des études universitaire (college)

Design

- Essai randomisé contrôlé (RCT)
- 2 traitements possibles (2x2 factor design)

Traitement 1: mettre de l'avant les biais

Campbell Collaboration

Plain Language Summary
Crime & Justice

2020

Red light cameras reduce injuries but may have no effect on total crashes

Red light cameras are effective at reducing right angle crashes, right angle injury crashes, and total injury crashes. However, they also appear to increase rear end crashes.

What is the aim of this review?

This Campbell systematic review examines the effect of red light cameras on red light running and various types of traffic crashes. The review summarizes results from 38 studies covering 41 evaluations, including 37 controlled before-after studies and one study using a controlled interrupted time series design. The majority of the studies were conducted in the USA or Australia.

Red light cameras photograph violators at traffic signals. They can reduce red light running, total injury crashes, and right angle crashes. However, they may also increase the risk of rear end crashes. The impact of red light cameras on other types of crashes, including total crashes overall, is unclear.

What is this review about?

Road traffic crashes are a major cause of injury and death around the world. Many crashes occur because drivers run red lights. Red light cameras (RLCs) photograph violators, and are used to remotely enforce traffic signals as part of strategies to reduce red light running and traffic crashes. However, there are questions about their effectiveness, and there have been a number of legal challenges to their use.

This review integrates findings from 37 controlled before-after studies, and one controlled interrupted time series study, that examine the effect of RLCs on red light running and various types of traffic crashes.

What studies are included?

Included studies measure RLC effectiveness by comparing intersections with cameras to those without them. Studies that examined area-wide programs, in which RLCs operated at some but not all signalized intersections in the community were also included.

Before-after studies were only included when they had a distinct control group and collected data for treatment and control conditions both before and after RLCs were put into operation. Studies involving additional interventions, such as speed cameras or enhanced police enforcement, were excluded.

This review summarizes 38 studies that contain 41 eligible evaluations of the effects of RLCs on red light running and/or traffic crashes. The studies come from four countries, with the majority carried out in the USA or Australia. Five of the 38 studies were assessed as having a low risk-of-bias and eight were assessed as having a moderate risk-of-bias.

How up-to-date is this review?

The authors of this review searched for studies up to 12 June 2015.

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About this summary

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Do red light cameras reduce red light running and traffic crashes?

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There is some indication that RLCs reduce total crashes due to red light running, but this effect was not significant. Additionally, there is some evidence, from three studies, that RLCs may reduce violations.

Other types of crashes did not appear to be significantly affected by the use of RLCs.

The economic implications of implementing RLC programs is not clear as few studies examined this. Overall, the costs of RLC programs tend to outweigh revenue. Studies of the effect of RLC programs on crash costs produced inconsistent results.

The potential benefits of a reduction in traffic violations and in some types of injury crashes should be weighed against the increased risk of other crash types.

What do the findings of the review mean?

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Traitement 2: retirer les images

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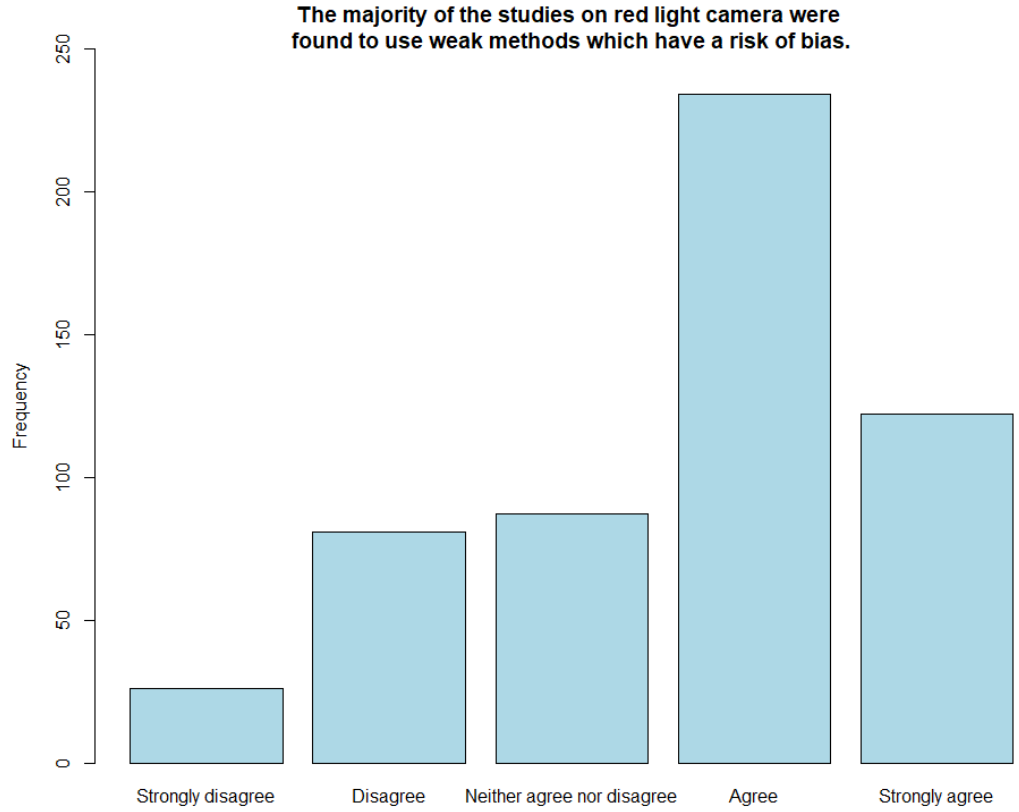
Distributions des 4 groupes

	biais=1	biais=0
image=0	**Groupe 1 (n=128)** Biais en exergue Image retirée	**Groupe 2 (n=145)** Biais à la fin Image retirée
image=1	**Groupe 4 (n=132)** Biais à la fin Image incluse	**Groupe 3 (n=145)** Biais à la fin Image incluse

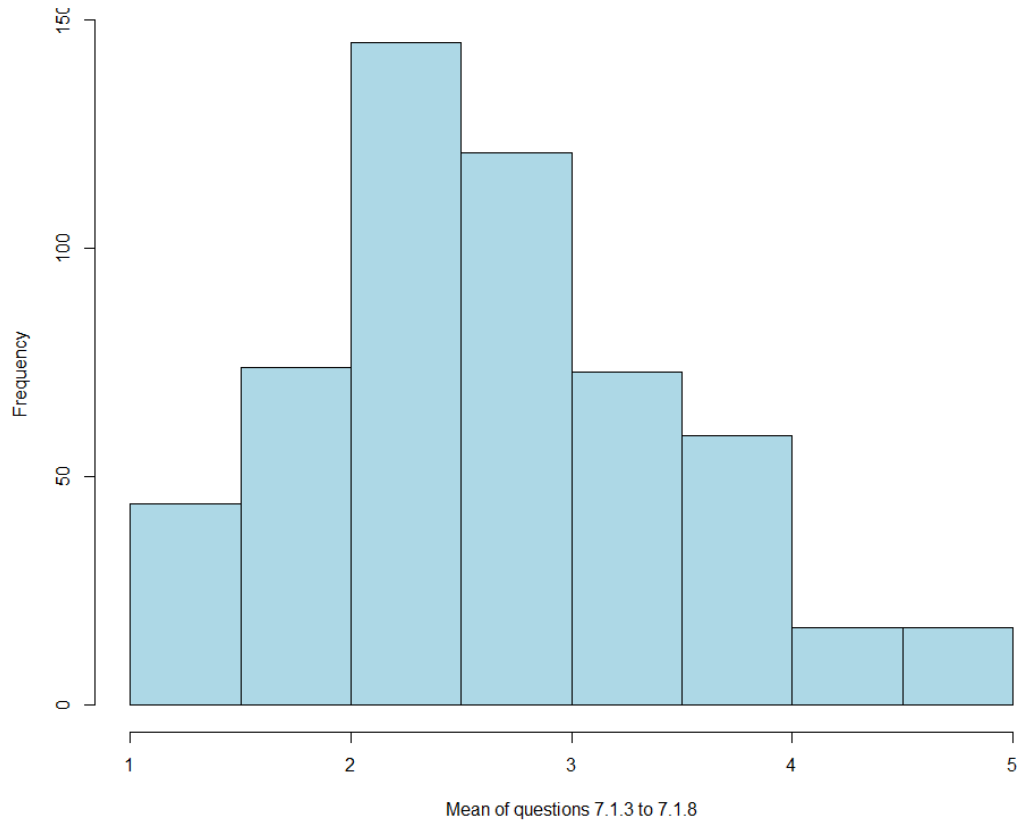
Var. Dépendante 1 – Method’s weakness

« La majorité des études sur les caméras d’intersection se sont avéré utiliser des méthodes faibles ayant des risques de biais. »



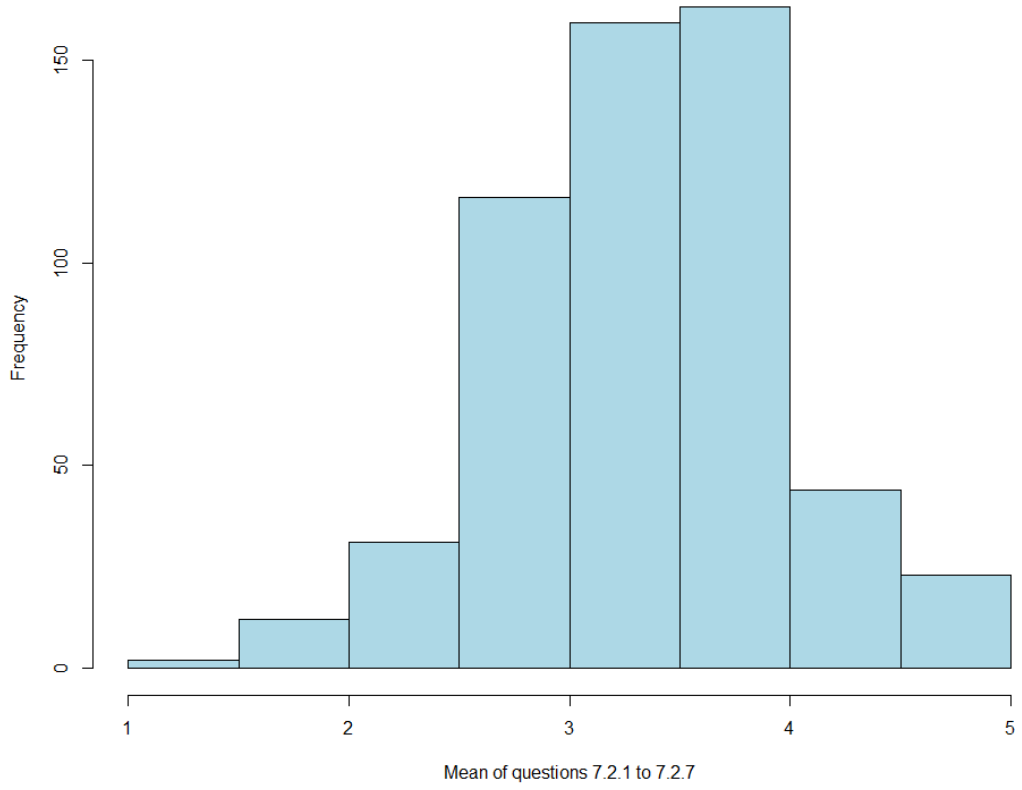
Var. Dépendante 2 – Perceived definiteness

1. *The research findings on the effectiveness of red light camera to reduce injuries are definitive.*
2. *Based on this document, our understanding of red light camera is complete.*
3. *The document is conclusive.*
4. *The findings reported in the document are reliable.*
5. *The document provides a strong basis for deciding whether or not to adopt red light camera in the future.*
6. *The findings reported in the document should not be considered preliminary.*



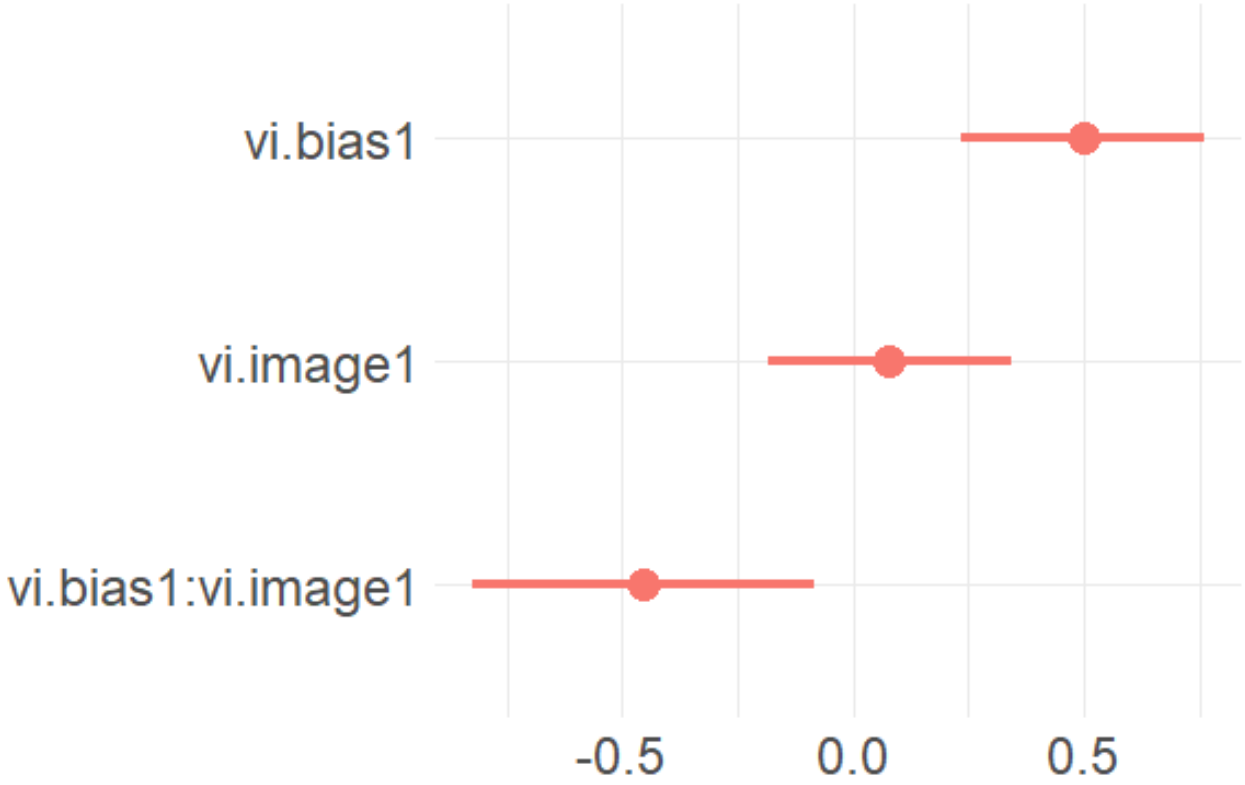
Var. Dépendante 3 – Attitude toward cameras

1. *Red light camera is promising.*
2. *Red light camera is safe.*
3. *Red light camera is certainly helpful.*
4. *The risks related to red light camera are lower than the benefits.*
5. *If a loved one had a need for which a red light camera is one of the solutions, I would like him or her to benefit from it.*
6. *If I had a need for which a red light camera is one of the solutions, I would like to benefit from it.*
7. *I find not concerning the idea of implementing red light camera.*



Résultats

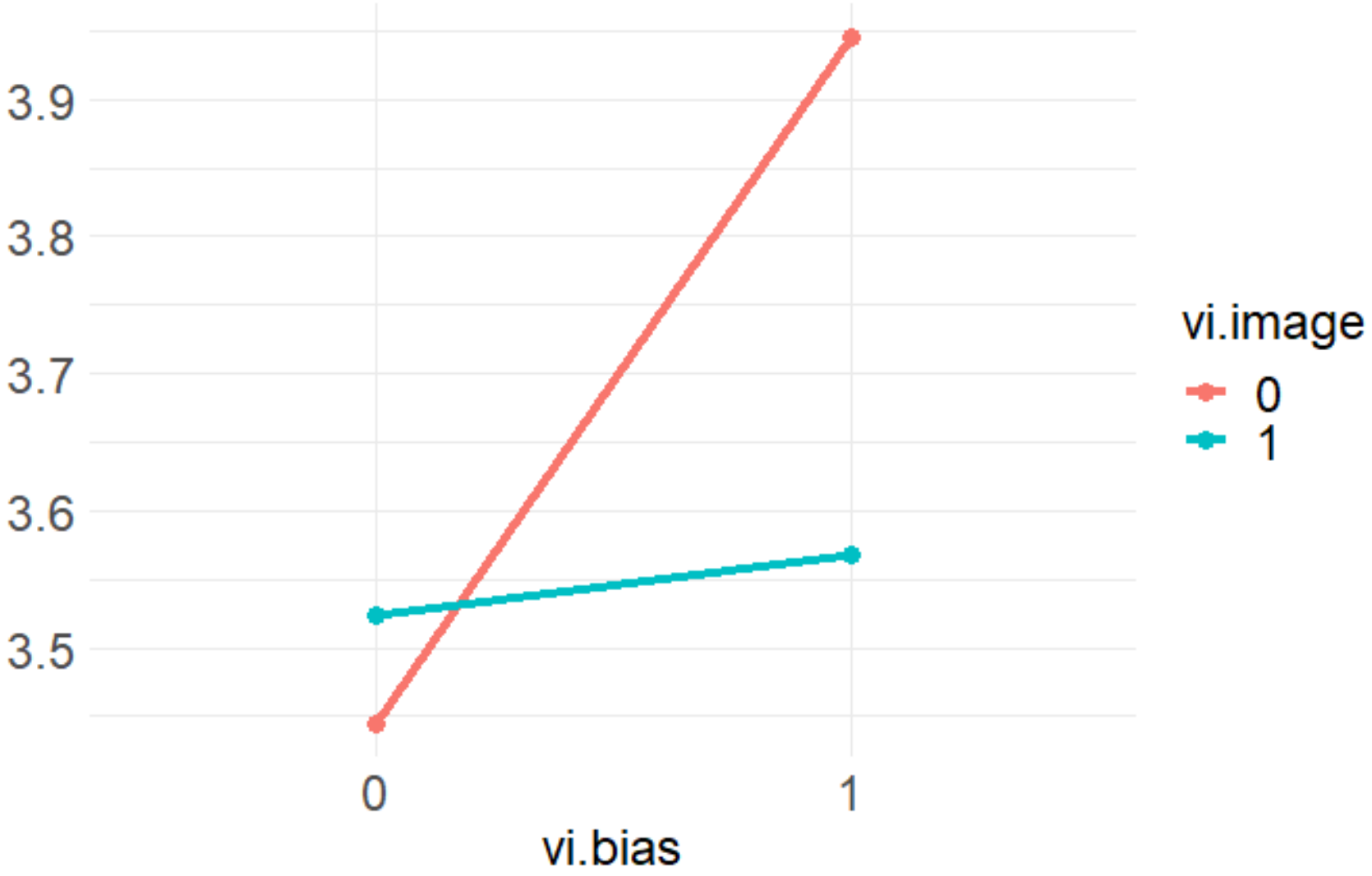
Faiblesse de la méthode



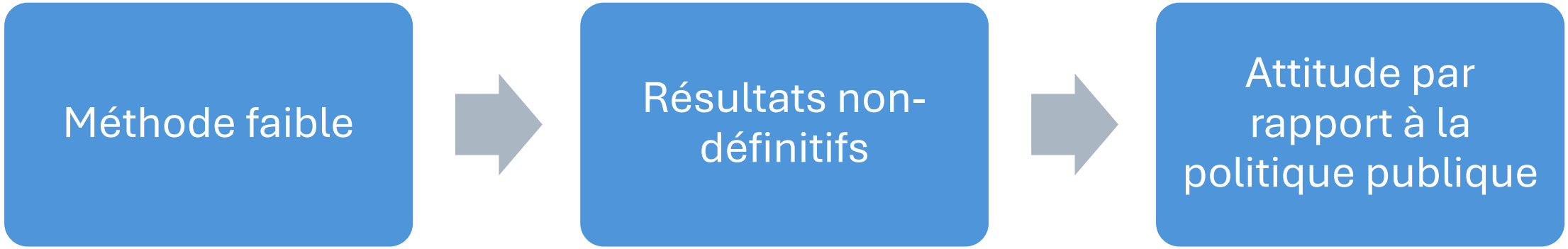
Nature définitive des résultats

Attitude face aux caméras

L’effet de mettre le biais en exergue



Pas d’effet sur les deux autres Var. Dép.



Implications

La décision d'ajouter des images non informatives dans les communications scientifiques peut avoir des **conséquences inattendues**.

La **capacité de traiter** les informations d'un texte est **vulnérable** au formatage.

La **capacité d'utiliser** ces connaissances est **faible**.

Suite du programme

Vérifier nos hypothèses et répliquer nos résultats

- Quel est le mécanisme en jeu? Utiliser l'oculométrie.
- Validité des résultats? Varier les thématiques, tests en laboratoire.

Étendre le programme

- Quelles implications pour le conseil scientifique? Tests avec des fonctionnaires.
- Faire des ponts entre la psychologie et l'administration publique? Améliorer les pratiques de communication.

Merci!

Des questions?

Résultats

	Model 1 Method's weakness	Model 2 Results' definiteness	Model 3 Attitude toward camera
(Intercept)	3.445***	2.708***	3.333***
	(0.097)	(0.066)	(0.051)
Bias	0.500***	-0.030	0.078
	(0.126)	(0.096)	(0.072)
Image	0.079	0.000	0.041
	(0.137)	(0.099)	(0.074)
Bias ×	-0.455*	0.167	-0.080
Image	(0.190)	(0.141)	(0.110)
Num.Obs.	550	550	550
R2	0.030	0.006	0.002
R2 Adj.	0.025	0.000	-0.004
Power	0.968	0.343	0.135