French Institute
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Cyclists' perceived aggression from car drivers on road interactions:

Paris and Berlin comparison

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bridging the gap between research and practice
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IFSTTAR

Introduction

- Barriers to cycling:
  - Aggression by other users: “car drivers are aggressive”
    → Road safety!

- Questions…
  - Which behaviors are aggressive?
  - Biased perception or accurate?
  - Cycling modal share – aggression?
  - Definition of aggression?

Aggressive behavior:
“any form of behavior directed toward the **goal** of **harming** or **injuring** another living being who **is motivated to avoid** such treatment”
(Baron and Richardson, 1994, p. 7)

Objectives

- Interactions between cyclists & car drivers
  → **perception of car drivers' behavior as aggressive**

- **Paris** (3%) vs **Berlin** (13%); 2008

Method I

- 3 pilot studies:
  - Identification of aggressive situations
  - Degree of danger / intention
  - Scenarios development

Interaction situations	Danger	Intention
1. To park or to stay on a cycle band	-	-
2. To drive closely behind a cyclist	+	+
3. To insult a cyclist	-	+
4. To open one's car door while parked	+	-
5. To get close to a cyclist	+	+

Scenario 5:
"you are on a cycle band, the road is straight and there are cars driving on the road. The driver in the car next to you gets close (about 0.50 meters) to you from your left side almost forcing you to get closer to the edge of the route".

Source: Road&Travel; http://www.roadandtravel.com; modified.

Method II

Participants

174 cycling students (70% female):

- 90 from Paris
- 84 from Berlin

Source:
Universal Uclick

Online questionnaire

- Scenarios Related Questions:
  - Emotions reactions
  - Perceived danger
  - Perceived intention
  - Perceived aggression
  - Behavioral reactions
- Trait Aggressiveness (Buss & Perry, 1992)
- Bicycle & Other Modes of Transport use
- Cyclists assessment of:
  - **Knowledge**
  - **Legitimacy**
- Cyclist Social Identity
- Socio-demographic measures

Results I

- Comparison Paris – Berlin

  - **Difference:**
    - Cycling frequency: **Paris** > Berlin ($F(1, 172)= 24.38$, $p<.001$, $\eta^2=.124$)
    - Cyclist social identity: **Paris** > Berlin ($F(1, 172)=11.70$, $p<.001$, $\eta2=.064$)
    - Legitimacy: **Paris** > Berlin ($F(1, 172)=6.28$, $p<.001$, $\eta2=.035$)

  - **No difference:**
    - Perceived aggression
    - Perceived intention
    - Perceived danger
    - Knowledge

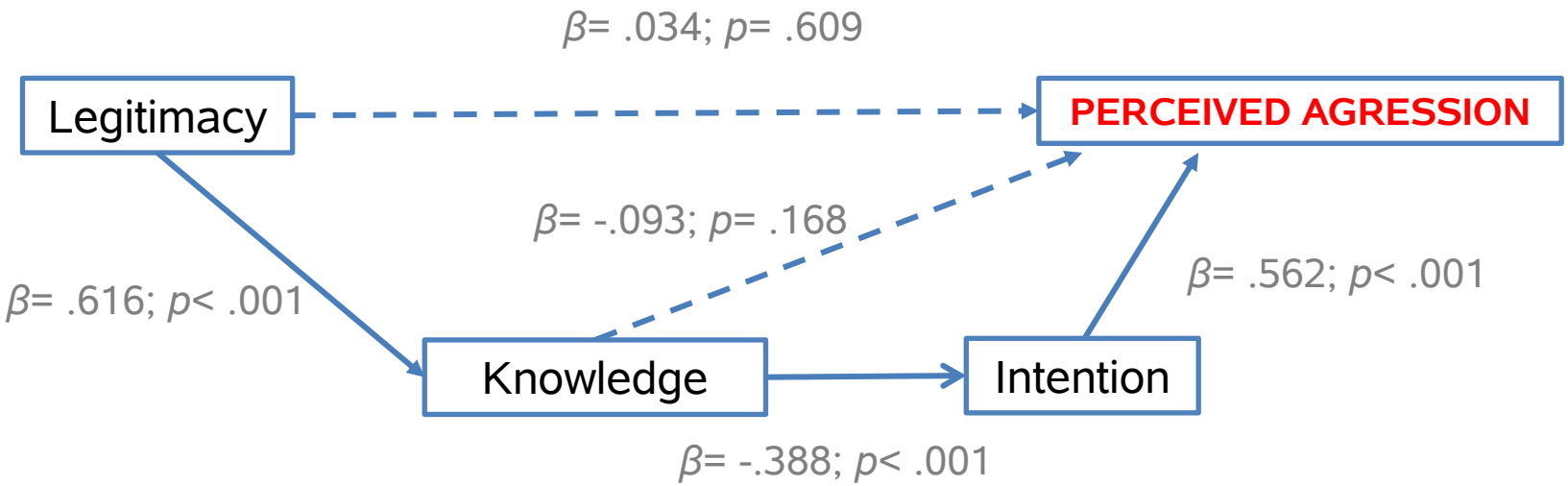
Results II

- Perceived aggression
  - **Perceived intention(+)**
  - Perceived danger (+)
  - Cyclist Social Identity (+)
  - Trait Aggressiveness (+)
  - Knowledge (-)
  - Legitimacy (-)

	β
I1 Anger expression	.236*
I2 Physical harm	**.316****
I3 Psychological Harm	.076
D1 Risk	-.061
D2 Gravity	-.106
D3 Dangerousness	.332*

* $p < .05$; ** $p < .001$

Results III



Source: Pittsburgh Post-Gazette

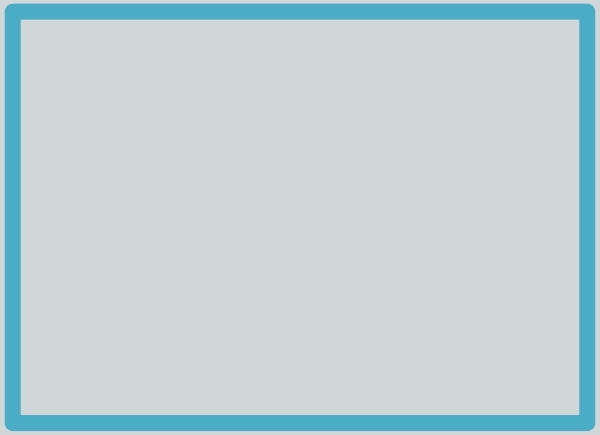
Conclusion

PERCEIVED AGGRESSION

- Cycling modal share?

Perceived more aggressive…

Non-adapted car-drivers' behaviors



… or less aggressive (mistake)

…Depending on LEGITIMACY & KNOWLEDGE

➔Actions: public policies, training, educational…

➔Better relationships: cyclists & car-drivers

➔Bridging the Gap between Research & Practice!

Source: Bekka Wright, BIKEYFACE, http://bikeyface.com

Thank you for your attention

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