



# INVALIDATING ADOLESCENTS' PRO- CANNABIS OPINIONS: A NEW TACTIC FOR PREVENTION

WILLIAM D. CRANO

CLAREMONT GRADUATE UNIVERSITY

## 2 USUAL ASSUMPTIONS, PRACTICES, AND A QUESTION OR TWO

- Make STRONG attitudes ambivalent
  - This weakens the attitude
  - Results in greater susceptibility to persuasion
- But, how should we treat attitudes that are already ambivalent – especially if the attitudes drift toward undesirable endpoints?

### 3

## AN ISSUE WITH THE USUAL ASSUMPTIONS

- Consider one highly ambivalent group (adolescents) whose attitudes toward some psychoactive substances (e.g., marijuana) may tend toward unambivalently bad outcomes (initiation of use) when we induce greater ambivalence
- Creating more ambivalence would seem to produce unusual responses (i.e., perhaps a stronger drift to marijuana usage)

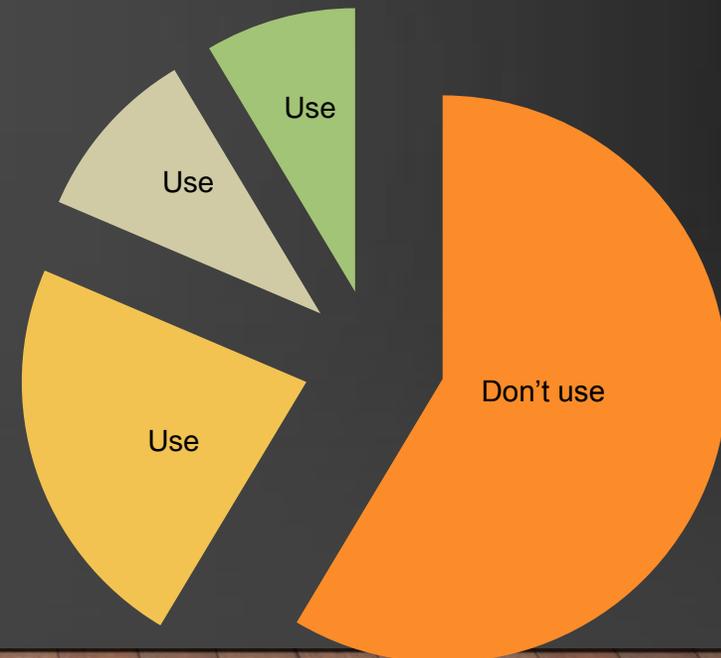
4

# A USEFUL THEORETICAL INSIGHT FROM CARL HOVLAND TO CONCEPTUALIZE AMBIVALENCE

AMBIVALENT ATTITUDE,  
DIFFERENT COLORS REFLECT  
DIFFERENT OPINIONS

## ATTITUDES & OPINIONS

- Opinions = Fundamental building blocks of attitudes
- Opinion valences may differ
- The more equal the + and – valences of opinions, the greater the attitude ambivalence



5

# SHOULD WE CARE? MARIJUANA USE IS LINKED TO THE FOLLOWING

- Learning deficits & inferior academic achievement
- Higher levels of aggression and delinquency
- Higher likelihood of car-related injury (self & others)
- Poorer relations with parents
- Greater risks of contracting sexually transmitted diseases
- More positive attitudes toward drugs and drug use
- **Addiction:** more adolescents enter treatment with a primary diagnosis of marijuana dependence than for all other illegal drugs combined.
- More associations with delinquent and drug-using friends
- Much higher risk of dangerous drug use in late adolescence and adulthood
- **Interference with normal brain development in youth**

## 6

# IF PRO-MARIJUANA OPINIONS ARE INVALIDATED, WILL ATTITUDE & INTENTIONS BECOME MORE NEGATIVE TOWARD USAGE?

- How we tried to do it:
- Show anti-marijuana video, and identify the 100 most negative responders (of 500)
- Randomly assign to one of three conditions:
  - Personal threat
  - Expert opinion counter subject's pro-marijuana opinions
  - Attributional method

# 7 FEEDBACK 1: DIRECT CONFRONTATION/ PERSONAL THREAT

It seems you didn't like the ad. There are other people who also did not like the ad. Experts have studied these people. The experts have found that these people are very childish.

# 8

## FEEDBACK 2: INDIRECT CONFRONTATION

It seems you didn't like the ad. Please click the top 3 reasons why you feel this way. Then, the computer will analyze your responses and give you feedback.

- The actors were fake
- The actors said things that were not true
- The ad did not make sense
- The ad was fake
- The ad was too serious
- The ad was not well made
- The ad did not give enough information about marijuana
- The ad was confusing
- The ad gave stupid reasons for not using marijuana
- The ad was boring

# 9

## FEEDBACK 2

After participants selected 3 reasons, and the computer apparently scored their responses, they were told the following: “We asked some experts to look at the same ad you did. They studied the different reasons people could have for liking the ad. The experts all graded the reasons you picked as childish.”

# 10 FEEDBACK 3: ATTRIBUTION APPROACH

It looks like you didn't like the ad. Now please list 8 reasons why you think the ad was bad.

- Note – the communication was of 60 seconds duration. We thought it would be very difficult for subjects to think of 8 reasons for their negative evaluations.
- We were correct.

# 11

## EXPECTATIONS

- If successful, the interventions would invalidate pro-marijuana opinions, and cause an attitude shift toward abstinence
- If the intervention failed, we were concerned the treatment would backfire, resulting in iatrogenic effects
- Note that all effects are theorized to operate through ambivalence.
- Both results were found, depending on intervention group

# 12

## MORE SPECIFICALLY...

- Groups re-rated the ads. No effect whatsoever. We expected this, but thought the intervention might weaken resistance to subsequent communication
- Ambivalence of their attitude toward the ad was measured (see next slide)

Then...

- All were exposed to a new anti-marijuana message, and rated their attitudes toward marijuana (not the communication) and their intentions to use the substance in the near future

13

## FINDINGS: GROUP 1: LIST REASONS FOR NEGATIVE REACTION TO AD EXPERTS FOUND YOU CHILDISH

- No effect of personal threat. Subjects ignored the threat – it was as if the negative review of their reasons never occurred
- Not useful, therefore, to consider further (i.e., mediating effects of treatment mediated by ambivalence on attitudes or intentions)

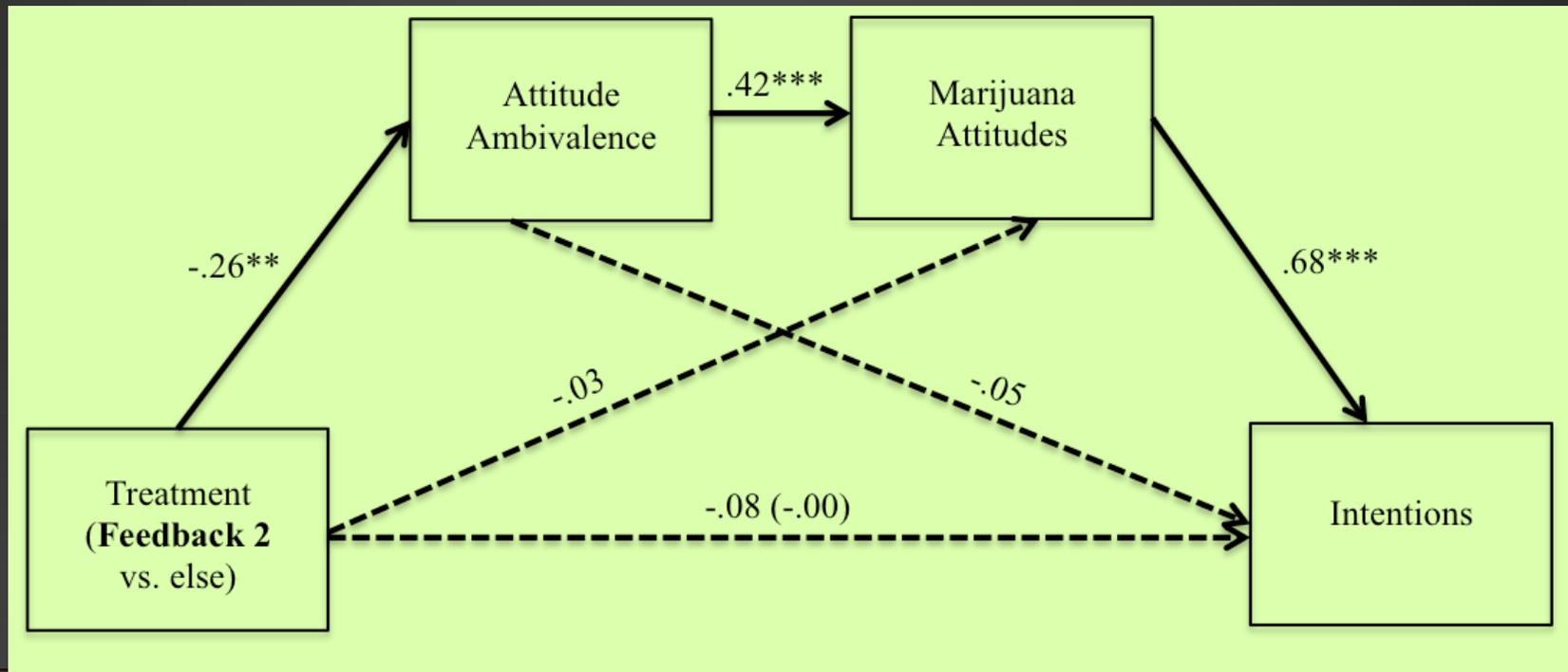
14

## FINDINGS: GROUP 2: CHOOSE 3 REASONS WHY YOU DISLIKED THE AD: EXPERTS FOUND *THE REASONS* CHILDISH

- Feedback 2: Intervention significantly reduced ambivalence, ( $B = -.27, p < .01$ )
- Did these changes affect attitudes and intentions?
- A sequential mediation analysis indicated they did

# 15 PROJECTED MEDIATION PROCESSES: FEEDBACK 2, SEQUENTIAL REGRESSION ANALYSIS

Intervention → Ambivalence → Attitude → Intentions



# 16 IMPORTANT ADDED FINDINGS OF THE SEQUENTIAL MEDIATION ANALYSIS

- Our hypothesized process:

Intervention → Ambivalence → Attitude → Intentions

- This model was statistically significant
- Alternative models were not. For example:

Intervention → Ambivalence → Intentions} NS

Intervention → Attitudes → Intention} NS

# 17

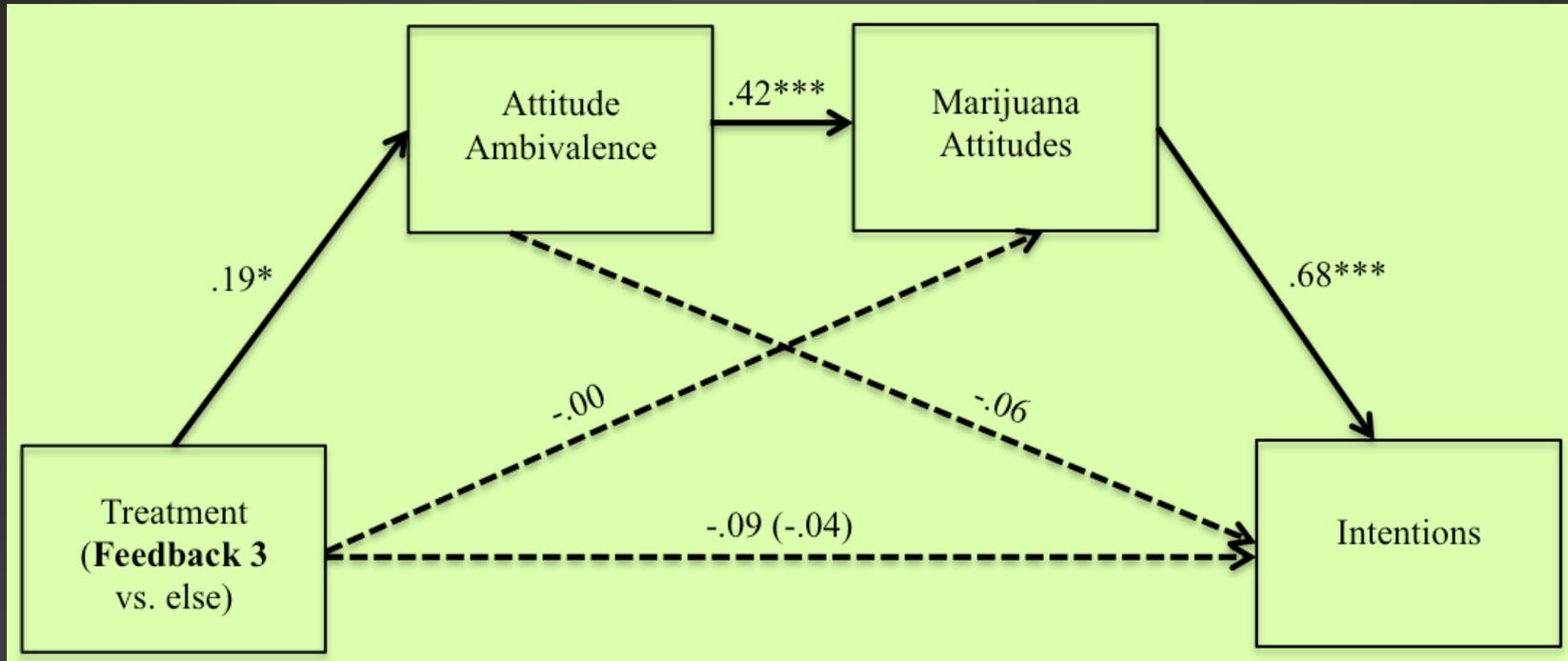
## FINDINGS: FEEDBACK 3

- Feedback 3: Iatrogenic effect, intervention significant increased ambivalence,  $B = .21, p < .01$
- Did these changes affect attitudes and intentions?
- A sequential mediation analysis indicated they did, but in an undesirable way

# 18

## PROJECTED PROCESSES: GROUP 3 AN INFORMATIVE FAILURE

- Intervention → Ambivalence → Attitude → Intentions



# 19

## REASON FOR FAILURE

- Notice the negative relation between Treatment and Ambivalence: we caused an increase in ambivalence
- This increased ambivalence was associated with greater attitudinal NEGATIVITY to our prevention appeal
- In turn, this was associated with a stronger intention to initiate marijuana use
- Nobody's perfect

# 20

## CONJECTURES

- Invalidating positive or negative opinions can affect attitudes
- Caution is indicated – affecting attitude ambivalence can affect the subsequent attitudes & intentions in positive *or* negative ways
- We need to develop an arsenal of interventions that operate in predictable ways in lowering ambivalence
- If we succeed, we will have developed an innovative and powerful way of effecting persuasive prevention

THANK YOU FOR YOUR  
KIND ATTENTION

[WILLIAM.CRANO@CGU.EDU](mailto:WILLIAM.CRANO@CGU.EDU)

