

# Designing Citizen Science for Behaviour Change



TeachWild participant, Australia

*World Parks Congress  
15 November, 2014  
Nancy Longnecker  
Professor of Science Communication*

# This Talk

## Theoretical frameworks

- Integrated Model of Science Communication
- Theory of Planned Behaviour
- Identity Framework

## Program management in theoretical context

## Bibliography

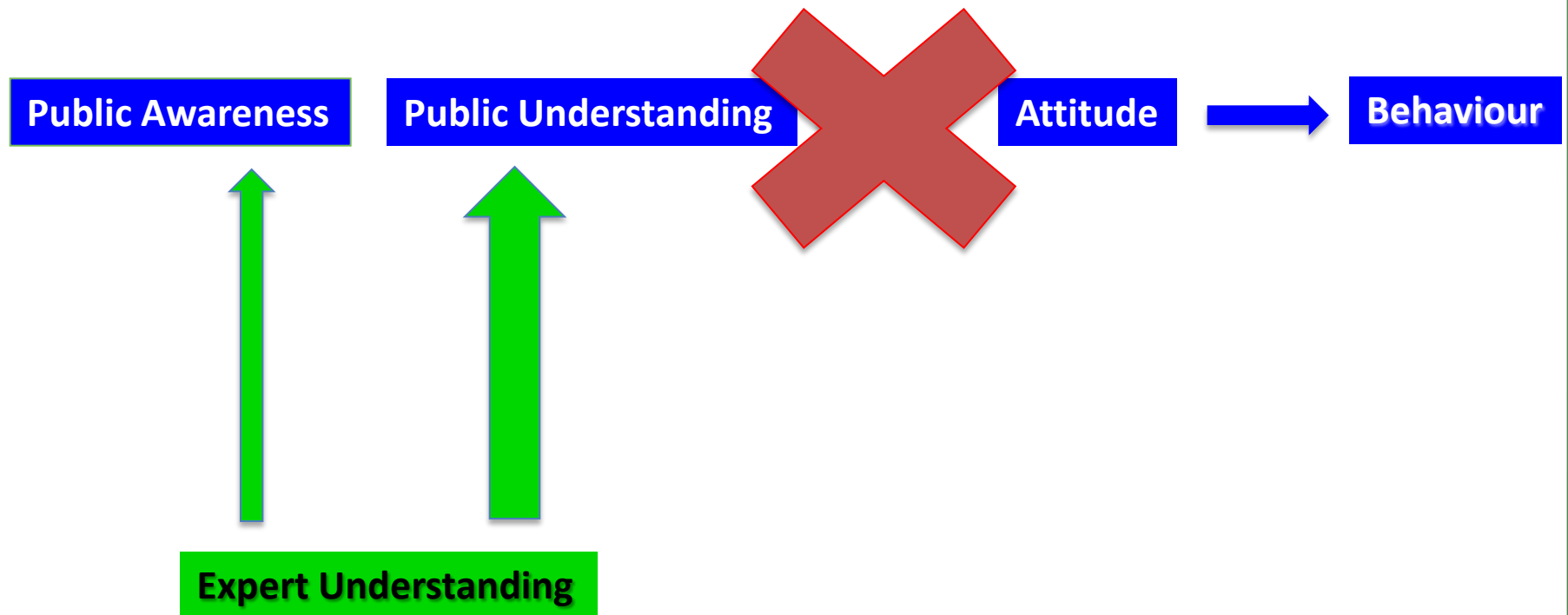
# Take home message

To maximise chance of behaviour change,  
benefit to participants' sense of identity.



Marine Metre Squared participants, NZ

# Deficit Model of Science Communication and Behaviour Change



# Knowledge is good!

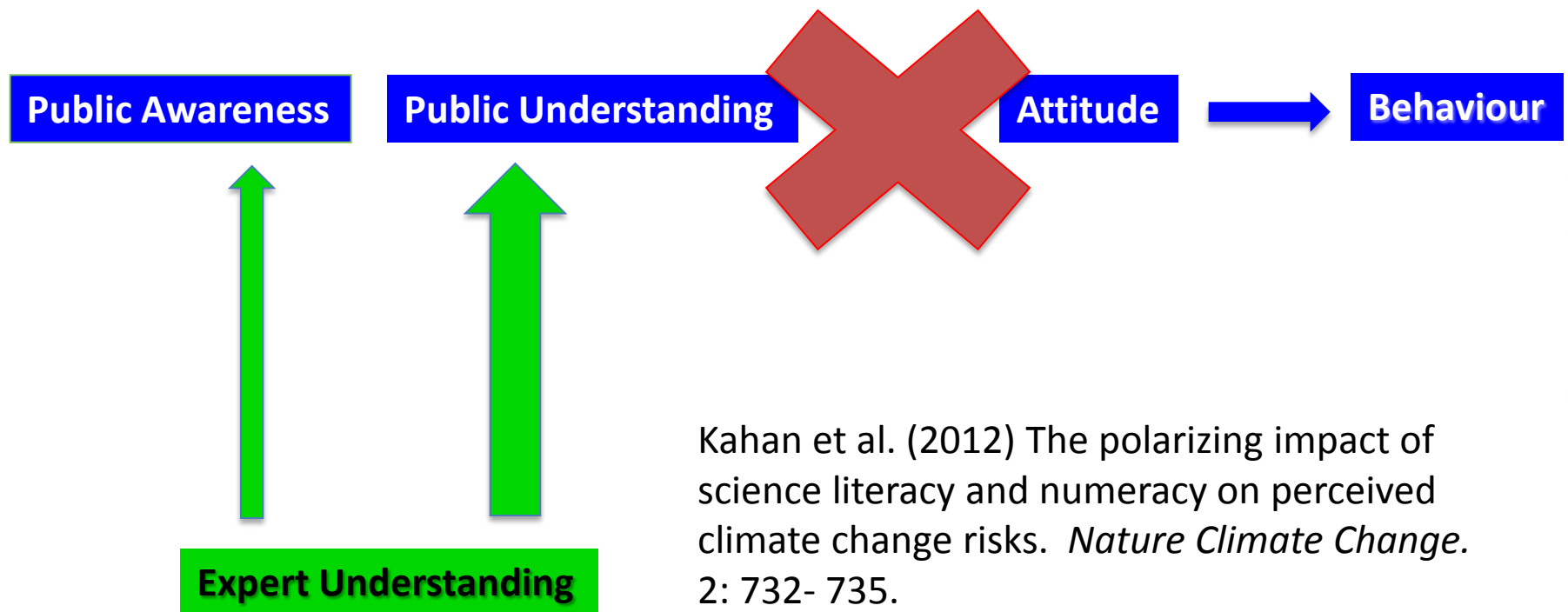
What do you remember about the day?

*I remember that Jeridene was talking about marine debris killing animals and how we should try and stop it because it's us that are mainly causing the problem.*

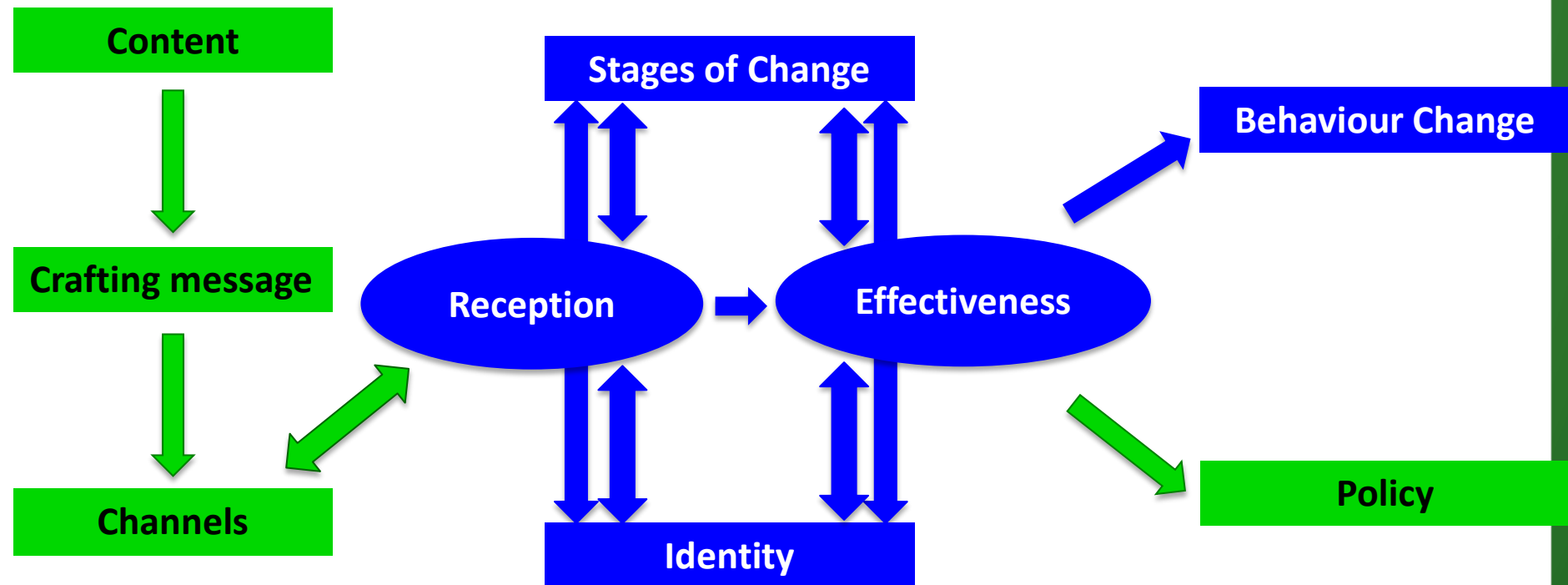
student; follow-up after TeachWild excursion, Australia



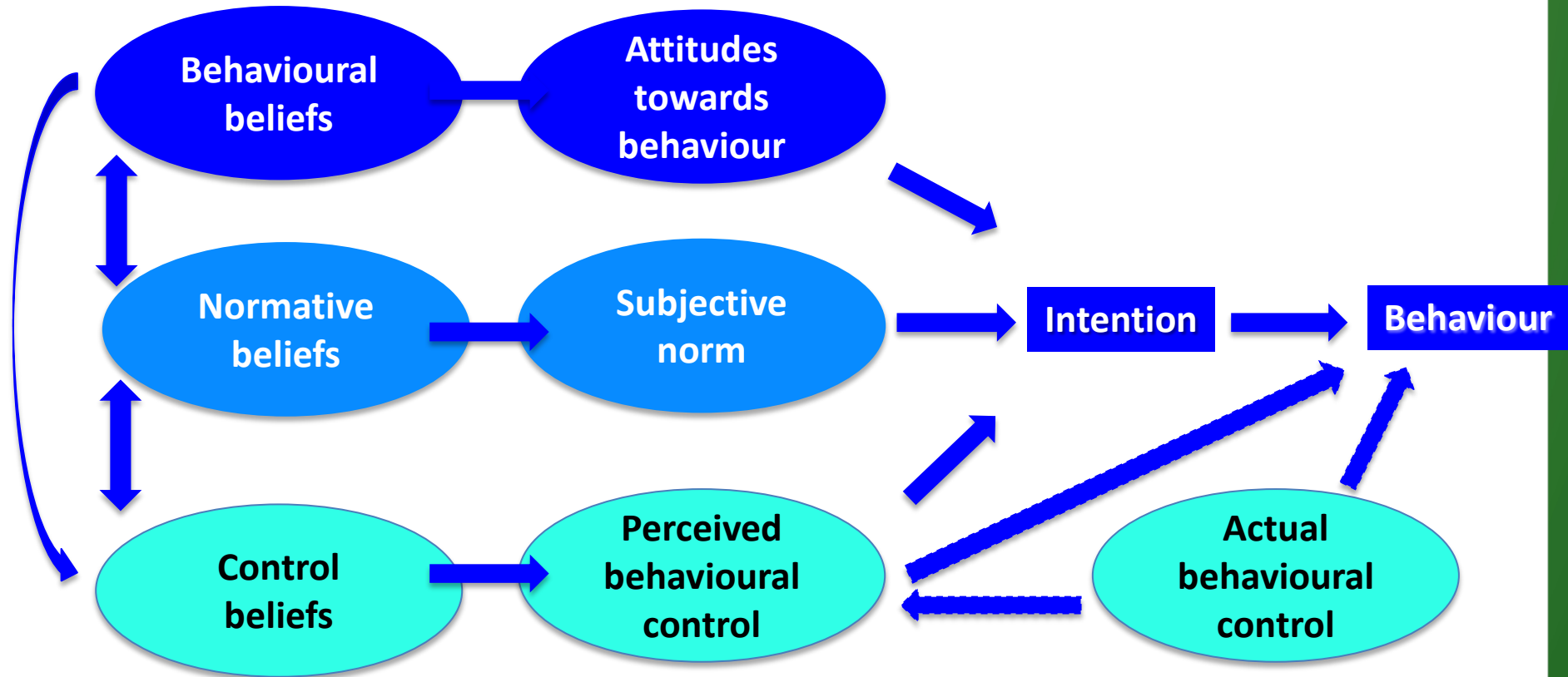
# Deficit Model of Science Communication and Behaviour Change



# Integrated Model of Science Communication



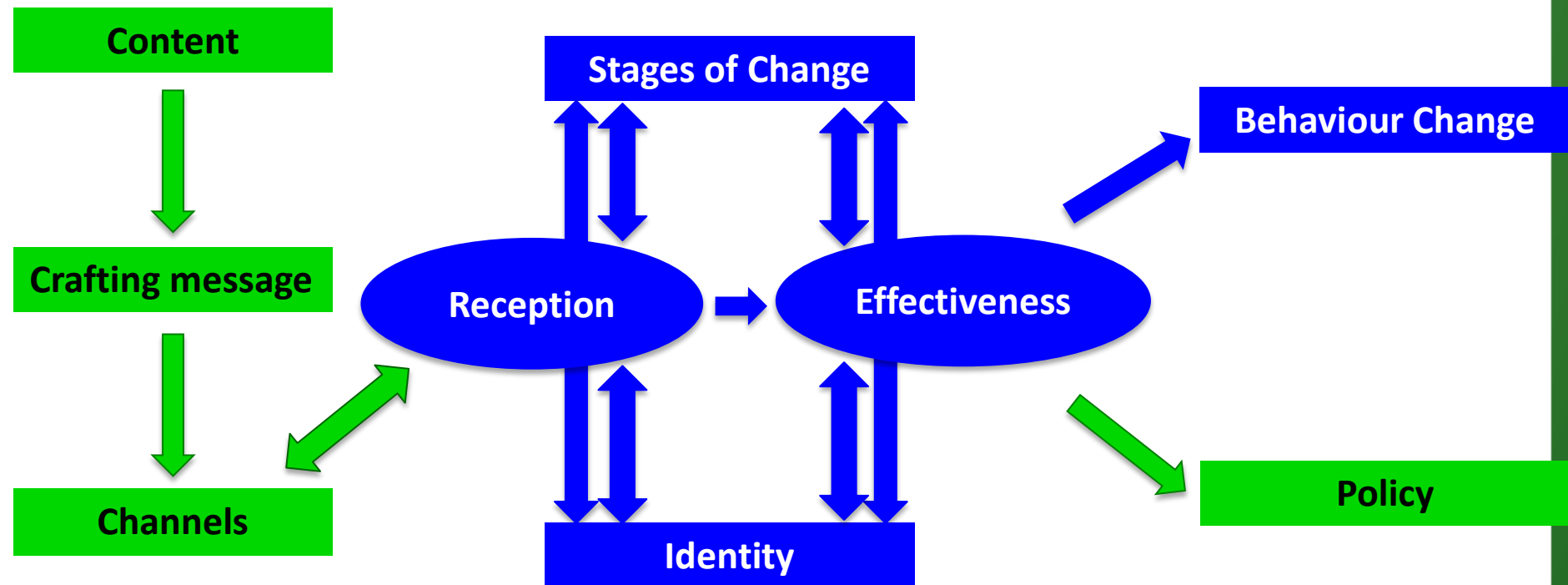
# Theory of Planned Behaviour



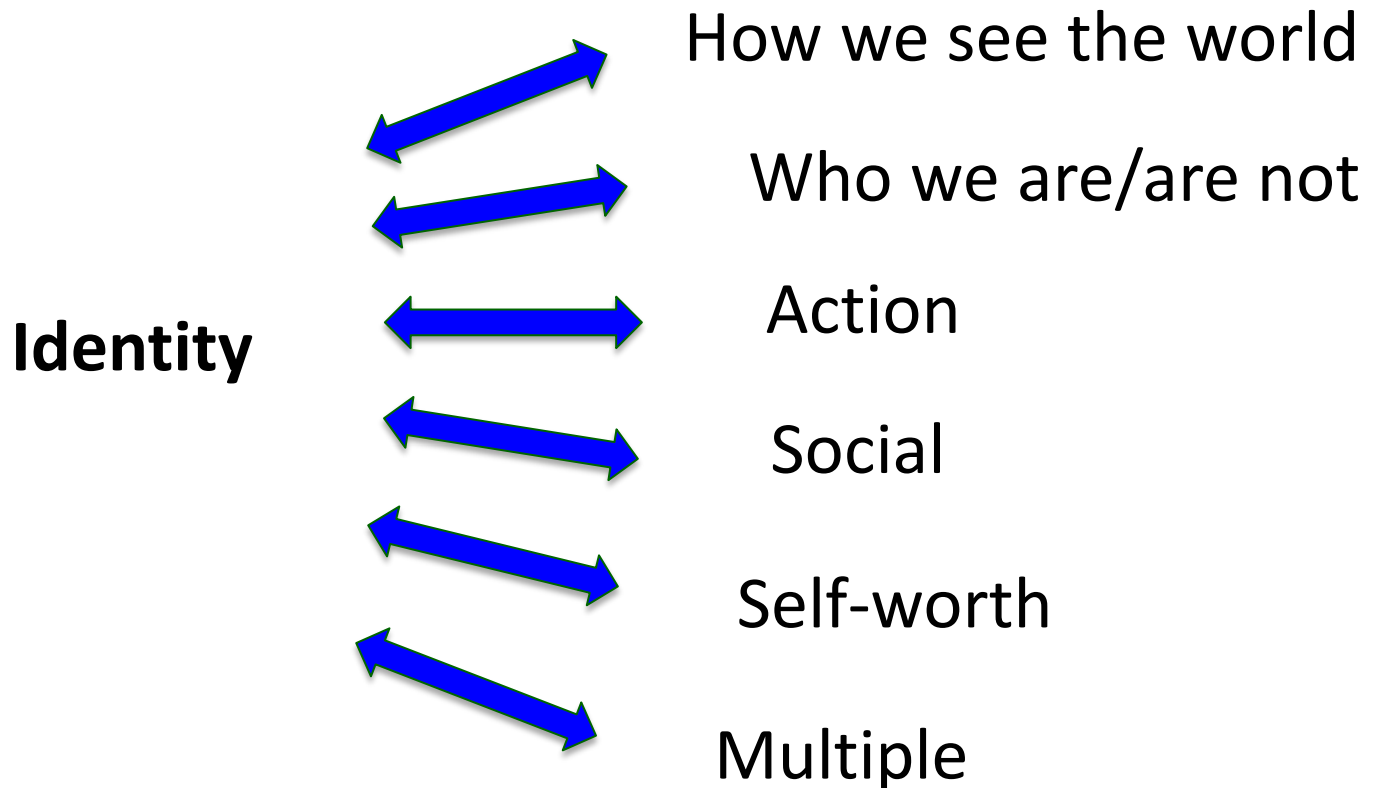
Fishein and Ajzen; from Ajzen, 2012



# Integrated Model of Science Communication



# Identity Framework



# Identity



# How we see the world

*[I wanted to] do a little bit in helping to  
monitor global warming.*

PlantWatch, Canada



## Targeted recruitment



# Identity



# Who we are/ are not



*I have always been brought up with a strong service ethic...I am interested in the environment... I want to play a public part, which is the reason for my volunteering efforts... To contribute.*

ClimateWatch volunteer, Australia

# Identity ↔ Action

## Participants:

- do,
- observe,
- contribute



*We went to the beach and did an emu walk to pick up rubbish. Then we did a data chart of the colour and type of rubbish. Then we watched a video and talked about what rubbish can last the longest.*

student; 2 months after TeachWild excursion; Australia

# Identity $\longleftrightarrow$ Action

To maximise chance of behaviour change,  
model the behaviour.

*I don't buy bottled water.*

Student, TeachWild, Australia



# Identity ↔ Social

## Participation as part of bigger whole

*I liked the idea that my tiny contribution could become part of a bigger observation.*

PlantWatch Volunteer, Canada

*[I] enjoy reading other observers' comments and comparing dates in other areas with my observations.*

PlantWatch Volunteer, Canada



# Identity ↔ Social

Participation as part of bigger whole





# Identity ↔ Self-worth

Empower participants.

- Training

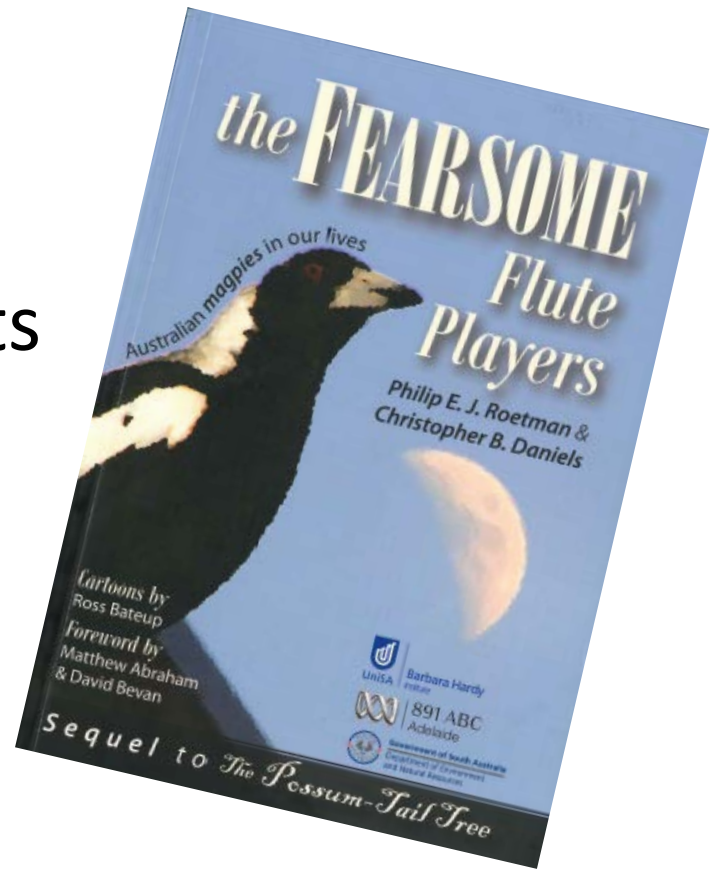
*I did things that I'd never done before and I did things that I didn't think I could do - like cutting up a bird to learn the techniques without fainting or vomiting. So I came back thinking 'well if I can do that then there's lots of things I can do.*

TeachWild Teacher, Australia



# Identity ↔ Self-worth

- Rewards
- Acknowledgements



# Identities



# Multiple

- Good citizen
- Teacher
- Parent

*[I got involved because of] concern for the environment and Australia's unique biodiversity.*

ClimateWatch, Australia

*As a teacher and the environmental coordinator I wanted to motivate my students to find ways to help and observe environmental issues.*

ClimateWatch, Australia

*I wanted to show my son how important it is to look after your environment and become a role model for him to follow...*

ClimateWatch, Australia

# Can participation change behaviour?

Have you done anything differently to reduce the impact of marine debris?

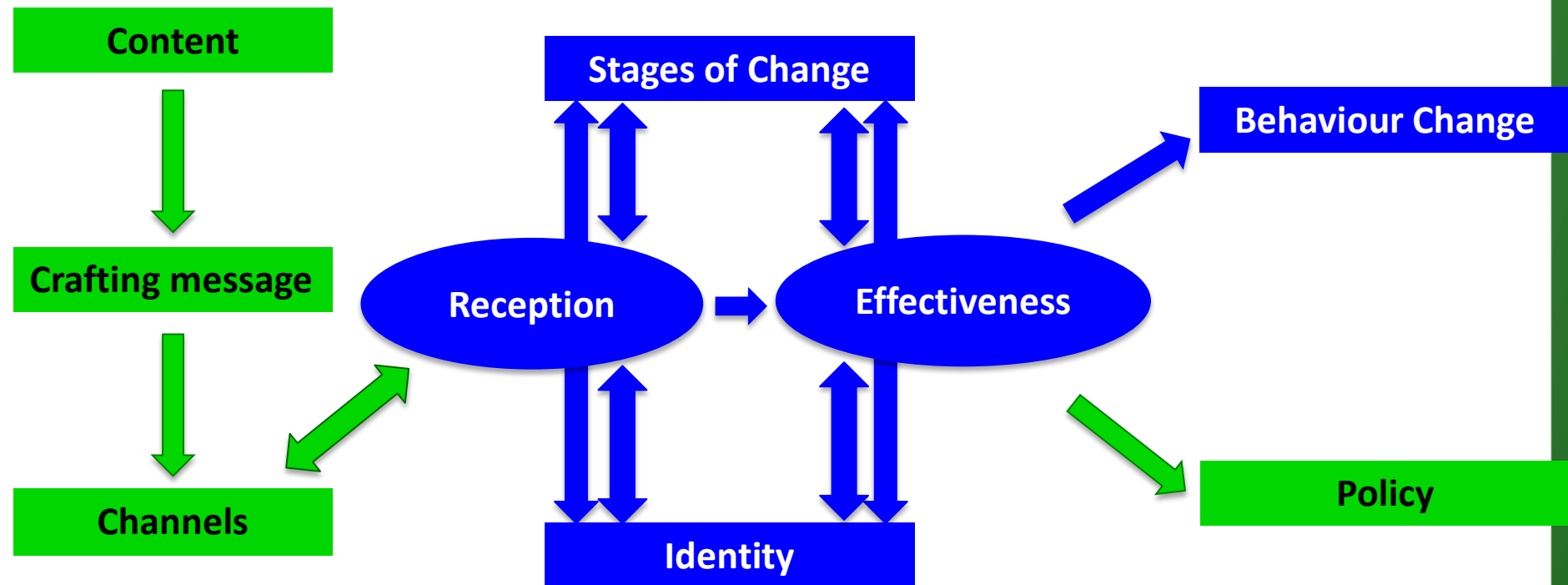
*I have become a sustainability ambassador and a Millennium Kid and I have been looking for ways to stop using plastic: eco cups. I also went to the eco fair with Millennium Kids.*

student; 2 months after TeachWild excursion, Australia



Photo: Jean Fletcher

# Integrated Model of Science Communication



# **Take home message**

Knowledge and information are not enough.

Programs should provide benefits to participants' sense of identity.

# Research on citizen science



Centre for Science Communication *the home of storytelling and science*

Menu 



Contact: [nancy.longnecker@otago.ac.nz](mailto:nancy.longnecker@otago.ac.nz)

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