

From Theory to Practice: Heuristics and Stop Aquatic Hitchhikers!

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Lake Superior wall cloud January '16 Duluth MN



STOP AQUATIC HITCHHIKERS!™

Prevent the transport of aquatic invasive species.
Clean all recreational equipment.

www.ProtectYourWaters.net

- National social marketing-based campaign
- Designed to link tools to barriers for behavior change
- Created to be ‘stepped down’ so partners can adapt or adopt resource materials
- 2,500 partners joined (business, agencies, academia, non-profits)
- Since 2006, campaign partners generated 2 B impressions



**STOP AQUATIC
HITCHHIKERS!™**

1st Comprehensive Great Lakes AIS Campaign

- ✓ By the Great Lakes Sea Grant Network led by MN funded by GLRI (143 new tools; 20.1 M impressions)
- ✓ 1st regional survey of North American Fishing Club Members (30,000) by GLSGN, North American Media Group and Wildlife Forever (Pat Conzemius)
- ✓ Objectives to determine if:
 - Strategic messaging using dedicated e-marketing could effectively reach anglers
 - Raise angler awareness
 - Change desired behaviors

Heuristics

- Play important role in problem solving, decision making, and planned actions.
- As mental shortcuts, they allow people to synthesize information effectively and efficiently.
- Shifting from previous to desired behaviors requires framing of issue as a benefit rather than a loss.

See Daniel Kahneman and Amos Tversky. 1981.
The framing of decisions and the psychology of choice.

5 e-Newsletters, Survey, 2 Follow Ups

Who, What, Where, When, How

SEPT 7, 2012

YOU Are The Front Line Security Force!

STOP AQUATIC HITCHHIKERS!

CLEAN DRAIN DRY

ALL BOATS, TRAILERS & EQUIPMENT EVERYTIME

Sea Grant Great Lakes Network

April 30
Who



APRIL 26, 2012

Avoid Dangerous Hitchhikers

STOP AQUATIC HITCHHIKERS!

CLEAN DRAIN DRY

ALL BOATS, TRAILERS & EQUIPMENT EVERYTIME

Sea Grant Great Lakes Network

May 7
What

JUNE 4, 2012

Complete This Invasive Species Survey For The Chance To Win \$150

STOP AQUATIC HITCHHIKERS!

CLEAN DRAIN DRY

ALL BOATS, TRAILERS & EQUIPMENT EVERYTIME

Sea Grant Great Lakes Network

June 4
Survey



Importance of Taking Action to Prevent the Spread of AIS



'08 MN Billboard near I-Falls, MN

97%
perceive AIS
as a threat in
the Great
Lakes

Note: Content for this slide has been modified from original presentation.

Data has been omitted since results are not yet published.

Contact Doug Jensen for more info.



Temporary Tattoo

Comparison of Awareness Before & After Exposure to SAH!

From:

✓ **46% very to moderately aware**

To:

✓ **96% very to moderately aware**
(those not exposed: 9 of 10 knew meaning)

✓ **50% increase**

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Jensen for more info.



Comparison of Actions Taken Before & After Exposure to SAH!

From:

✓ **64% always to usually take action**

To:

✓ **97% always to usually take action**

✓ **33% increase**

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Kawishiwi Watershed Protection Project (KWPP)

- White Iron Chain of Lakes Association (WICOLA) joined SAH! in 2009
- Concerned over spread of AIS
- Partnered with MN Sea Grant, MN Pollution Control Agency, Lake County SWCD, Forest Service, others
- Little AIS outreach in NE Minnesota
- WICOLA embarked on 30 month project to extend SAH! at meetings, booths, and hosted a symposium
- Conducted 2012 mail survey of 2,200 households re: AIS issues (38% response rate)



Most Effective AIS Information Sources

Table 3. "Most Effective" AIS Information Sources

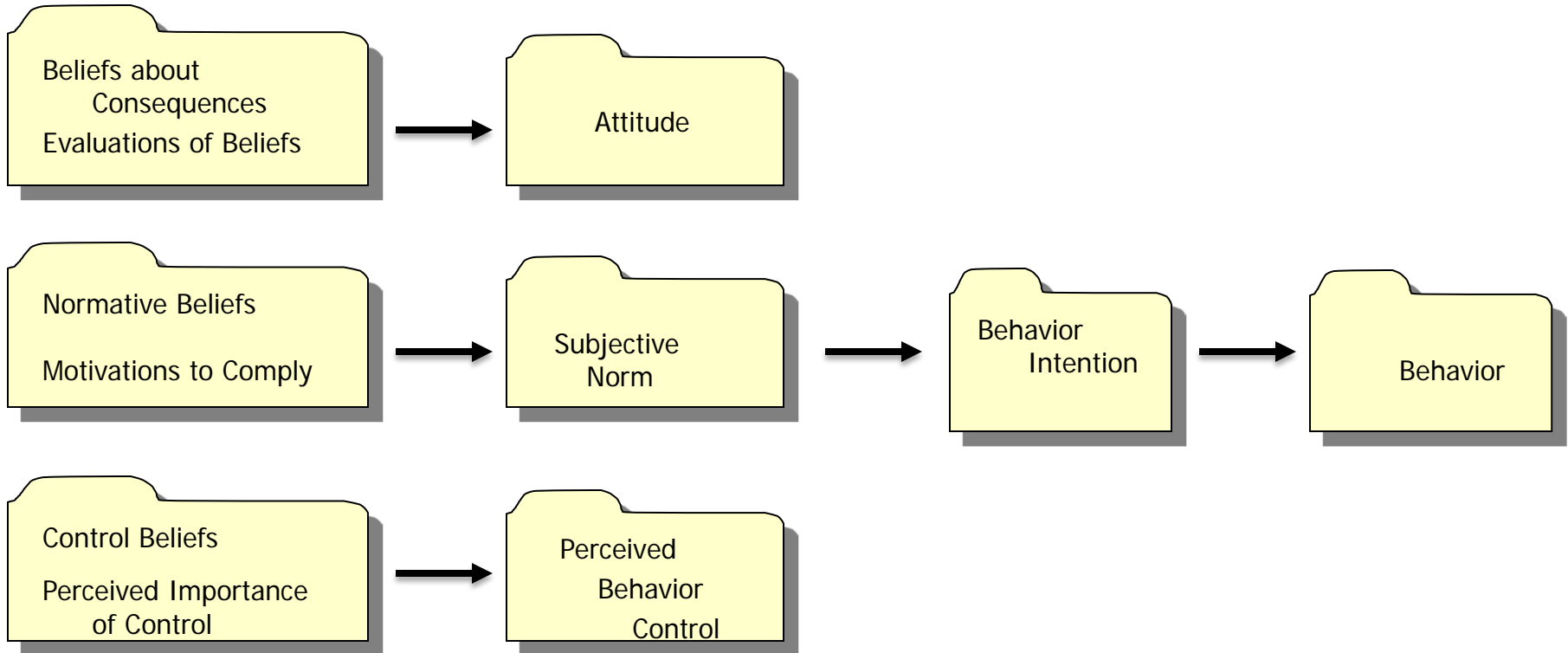
Signs at Water Accesses
Magazine ads or articles
Television ads, programming or news
Internet/websites
Bait shop posters
E-mail/e-newsletters
Fishing, boating or environmental organizations
Newspaper ads or articles
Regulation cards and pamphlets
Exhibits or booths at sport shows, fishing tournaments or other events
Friends, family and/or acquaintances
Educational brochures, fact sheets or species ID cards
Online videos
Radio ads, programming or news
Watercraft inspectors
Social media
Billboards/signs along highway
Other
Law enforcement officers
Kiosk at sporting goods stores
Displays at rest areas
Stickers
Mobile apps
Windshield flyers
Highway radio messages



Access Sign

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Theory of Planned Behavior



TPB by Icek Ajzen

Visit: www.people.umass.edu/aizen/tpb.html



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Actions Taken

Ranking	Action Taken
VH	Drain water from motor, bilge and live well
VH	Inspect and remove aquatic plants, animals and mud from watercraft, motor and trailer before leaving access
H	Dispose of unwanted live bait, worms and fish parts in the trash
M	Rinse watercraft and equipment with garden hose
M	Drain bait container and replace with spring or dechlorinated water
M	Dry everything for at least 5 days before use
M	Flush motor according to owner's manual
L	Wipe hull of watercraft with a towel before use
L	Wash watercraft with high pressure or hot water

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Motivations for Taking Actions

Ranking	Reason/"Influencer"
VH	A desire to keep AIS out of our lakes and rivers
VH	The feeling of personal responsibility; my actions make a difference
VH	The desire to prevent damage to my boat, equipment or personal property
H	Seeing other people taking action
H	Laws or regulation that require actions to prevent transport of AIS
H	Knowing other people take action
H	Friends, relatives or acquaintances advising me to take action
H	Threat of enforcement by conservation or other law enforcement officers
H	Threats of fines that would cost me money
M	Embarrassment of being found in violation

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Reasons for “Not” Taking Actions

Reason	% Response*
I did not transport the boat to another body of water	61.0
No boat washing equipment was available	15.3
I was not in waters that had AIS	7.2
I did not know what I was supposed to do	2.9
I believed that the current regulations were ineffective	2.2
It is inconvenient, I did not have the time	1.7
I did not realize the importance of my actions	1.3
Spread of AIS is only a matter of time; my actions won't help	1.3
I forgot	1.1
I was physically unable	0.8
AIS are everywhere anyway; my actions won't help	0.8
I believed it only takes one to cause an infestation; my actions won't help	0.5
I did not want anyone telling me what to do	0.3
I did not believe that AIS was a problem; I did not care	0.3
I was willing to pay the fine	0.0

For comparison: KWPP results compared favorably to 2013 GL AIS Angler Survey. There were no differences highlighted in red in original presentation.

Note: Content for this slide has been modified from original presentation. Data 2013 Angler survey has been omitted since results are not yet published. Contact Doug Jensen for more info.





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Post Events (11) Comparison of Awareness Before & After

From:

✓ **68% very to moderately aware**

To:

✓ **82% very to moderately aware**

✓ **26% increase $p < 0.05$**

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Post Events (11) Comparison of Behavior Before & After

From:

✓ 53% always to usually take action

To:

✓ 92% always to usually take action

✓ 39% increase $p < 0.05$

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Summary of Results



- Awareness and reported behaviors increased based on understanding of AIS threats
- Consistent use of uniform messages based on guidelines resulted in reported desired behavior change
- Motivations for taking actions are linked to positive attitudes, beliefs, personal and social norms, along with threats of economic impacts
- Motivations concerning regulations increased
- Lack of motivation very low based on reasons 1-3% after audience is strategically targeted

Conclusion

- Across space and time, five assessments demonstrate the effectiveness of the *Stop Aquatic Hitchhikers!* and *Habitattitude* campaigns at small and large regional scales.
- Great Lakes angler survey demonstrates that a strategic heuristic approach was just as effective and reached a much larger audience compared to direct communication and education targeting a smaller audience (2,200 land owners) within smaller Kawishiwi watershed.
- Co-branding works too!
- Use campaign brands and guidelines at every opportunity – no need to reinvent the wheel.

Thank you!

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