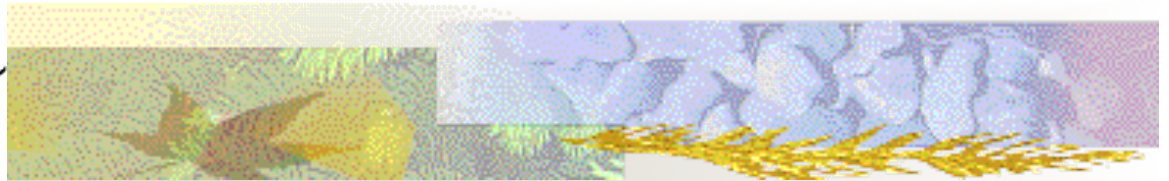


Primed for Action? The potential role of priming in renewable energy acceptance



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Caroline's Cool Conclusions



- *Environmental Motivation* moderates priming effects [but NEP doesn't]
 - Learn more about the Environmental Motivation Scale
- Peer Pressure might be a good thing!
 - at least for sources of environmental motivation.....
- Ideas on using source of motivation for future research

Logo courtesy of 'Cool as a Moose' <http://coolasamoose.com/>

The Sustainability Solutions Initiative at UMaine

- Interdisciplinary grant [5 yrs, \$20million]
 - 26 project teams
 - natural and social science disciplines
- NSF EPS 0904155



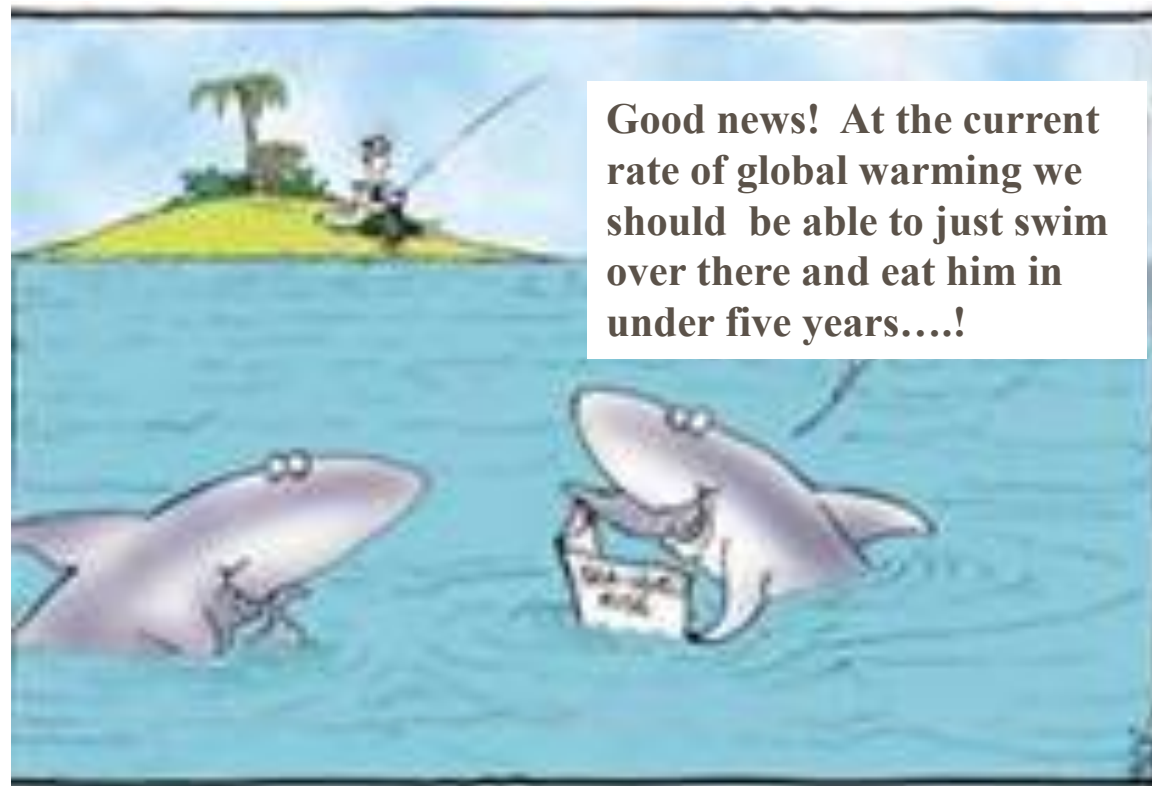
Sustainability Behavior





Why is information so important?

■ ‘Invisible’ Environmental Issues





What increases or decreases information effectiveness? **Fun stuff!**

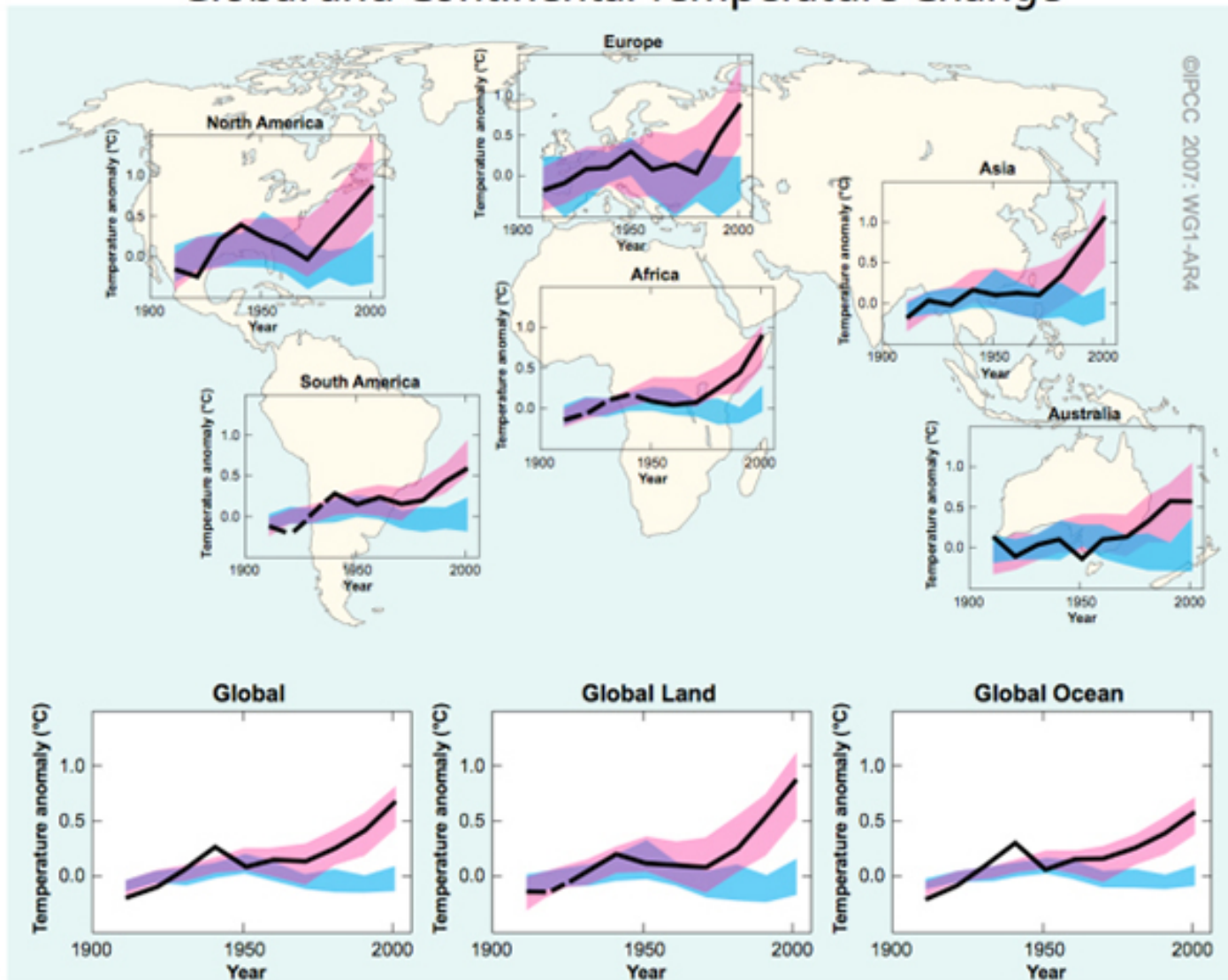
- Magee, 2009 – *NEP*
- Verplanken and Holland, 2002 – *values/self*
- Evans et al, 2012 – *context/priming*
- DeYoung 1985, 2000; Tabernero and Hernandez 2011, 2012 – *motivation, efficacy*
- Constanzo et al., 1986, Moser, 2010 – *evaluation of info*



Differences across individuals influence information interpretation

What works for one.....

Global and Continental Temperature Change





STOP GLOBAL WARMING

Do you have any idea just how many prehistoric, city-stomping monsters are hibernating inside those glaciers?

What's the policy context?


- Mainers are being asked to:
 - make investments in wind
 - Make decisions about allocating (or removing) funding to natural resource management
- Do all Mainers make the same decisions?
 - What drives our decisions towards these alternatives





Why is context so important?

- Unanswered Prime Questions
 - Under what conditions are individuals more (less) susceptible to priming effects?
 - What may moderate prime effect?
- Maine Media discussion
 - Focus on Economic
 - But isn't renewable energy for the environment?



Will people see what we prime them
to see, or what they want to see?

- H1: Effect of priming on agreement with
wind energy/priority issue -assimilate or contrast
- H2: NEP will moderate assimilation of
prime -attentional bias
 - Higher NEP yield higher assimilation of
environmental messages
- H3: Environmental Motivation moderate
assimilation of prime
 - Environmental Motivation Scale development



Why would source of motivation matter?

■ **Intrinsically motivated:**

- increased willingness to engage in ‘tough’ behaviors
- stick with behavioral changes

■ **Extrinsically motivated:**

- behavior ends soon after the external force
- Can others see your behavior?
- Decrease likelihood of spillover (and increase licensing?)



Environmental Motivation Scale

- 17 questions; 8 extrinsic (EM) and 9 intrinsic (IM)
- Sample Intrinsic: *Engaging in proenvironmental behavior is an important part of who I am*
- Sample Extrinsic: *If I engage in behaviors that may be harmful to the environment, I feel like others judge me negatively*

I am indebted to Dr. Ashby Plante and her lab at Florida State University

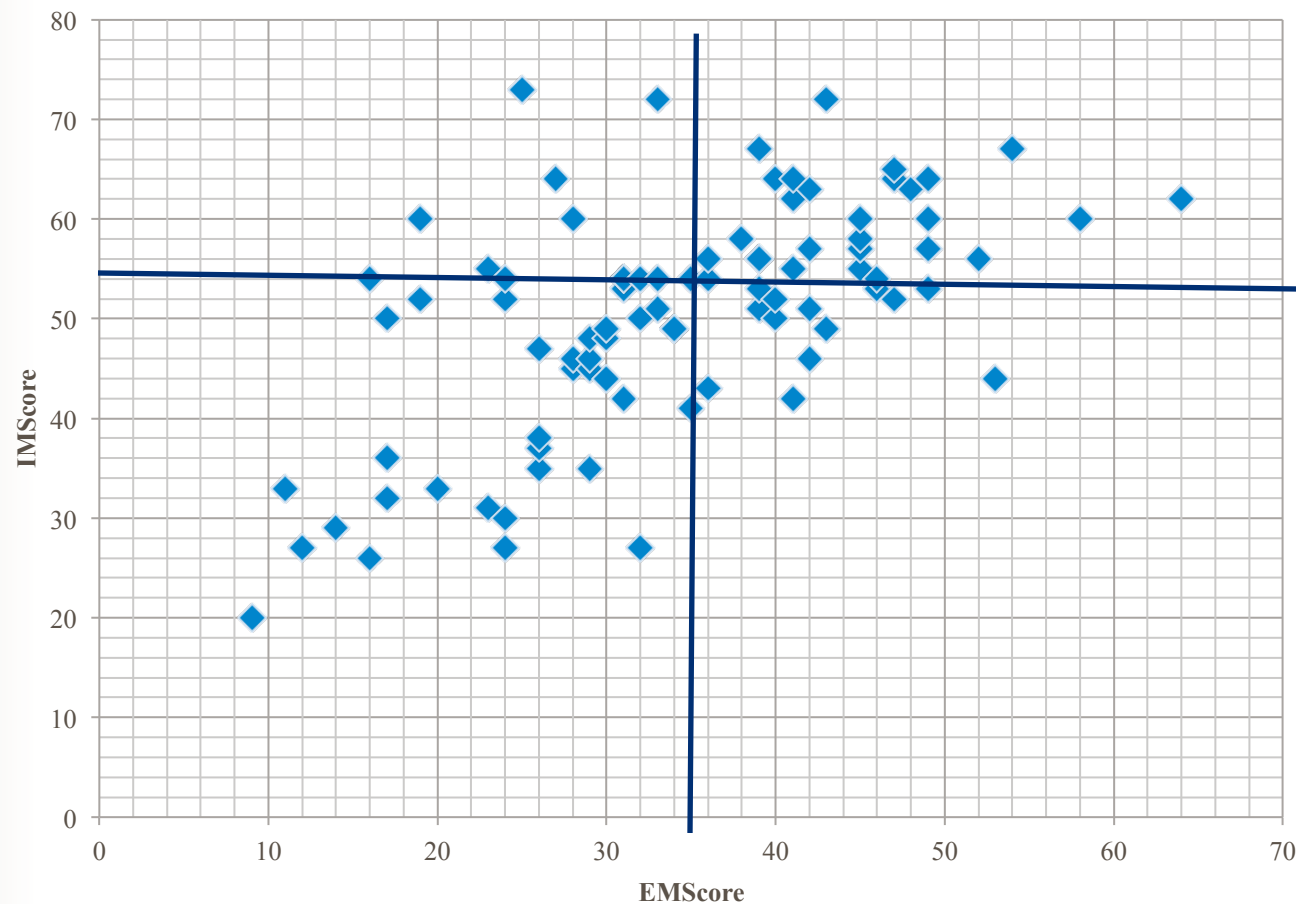


What can we learn about this scale?

- (1) intrinsic and extrinsic questions measuring different underlying components?
- (2) individuals more influenced by one type of motivation, and/or if interaction is appropriate;
- (3) determine the relationship of this scale to the NEP (if any).

What does the data tell us?

- Possibility of multi-dimensional construct





Is there a relationship to the NEP?

■ Correlation

- NEP and IM is .42 ($p < .001$)
- NEP and EM is .25 ($p < .05$).
- Limited correlation between specific questions

■ Factor Analysis: 3 factors explain 50% of variance

- No overlap between IM/EM and NEP

■ Regression Analysis: Take home: NEP and IM/EM appear related, but measuring different components



The Experiment

- (1) Pre-video questions
- (2) Prime: word scramble
- (3) Activity: Video of Dr. H. Dagher discussing offshore wind energy in Maine
- (4) Post-Video Measurements:
 - Agreement with statements regarding wind for Maine; wind energy as economic or environmental tool.

Env. Measure	Prime	Economic	Environmental	Neutral
<i>Agreement with Future presented in Video (agree video view)</i>				
Intrinsic Motivation		.57***	.252	.207
Extrinsic Motivation		.49***	.278	.251
NEP score		.144	-.038	.272
<i>Agreement with Wind for Economic Development (agree economic)</i>				
Intrinsic Motivation		-.048	-.064	-.098
Extrinsic Motivation		.154	.046	-.202
NEP score		.064	-.189	.046
<i>Agreement with Wind for Environmental Protection (agree environmental)</i>				
Intrinsic Motivation		-.018	.381**	.137
Extrinsic Motivation		.153	.339 *	.335**
NEP score		.222	.030	.232



Results: Hypothesis 1

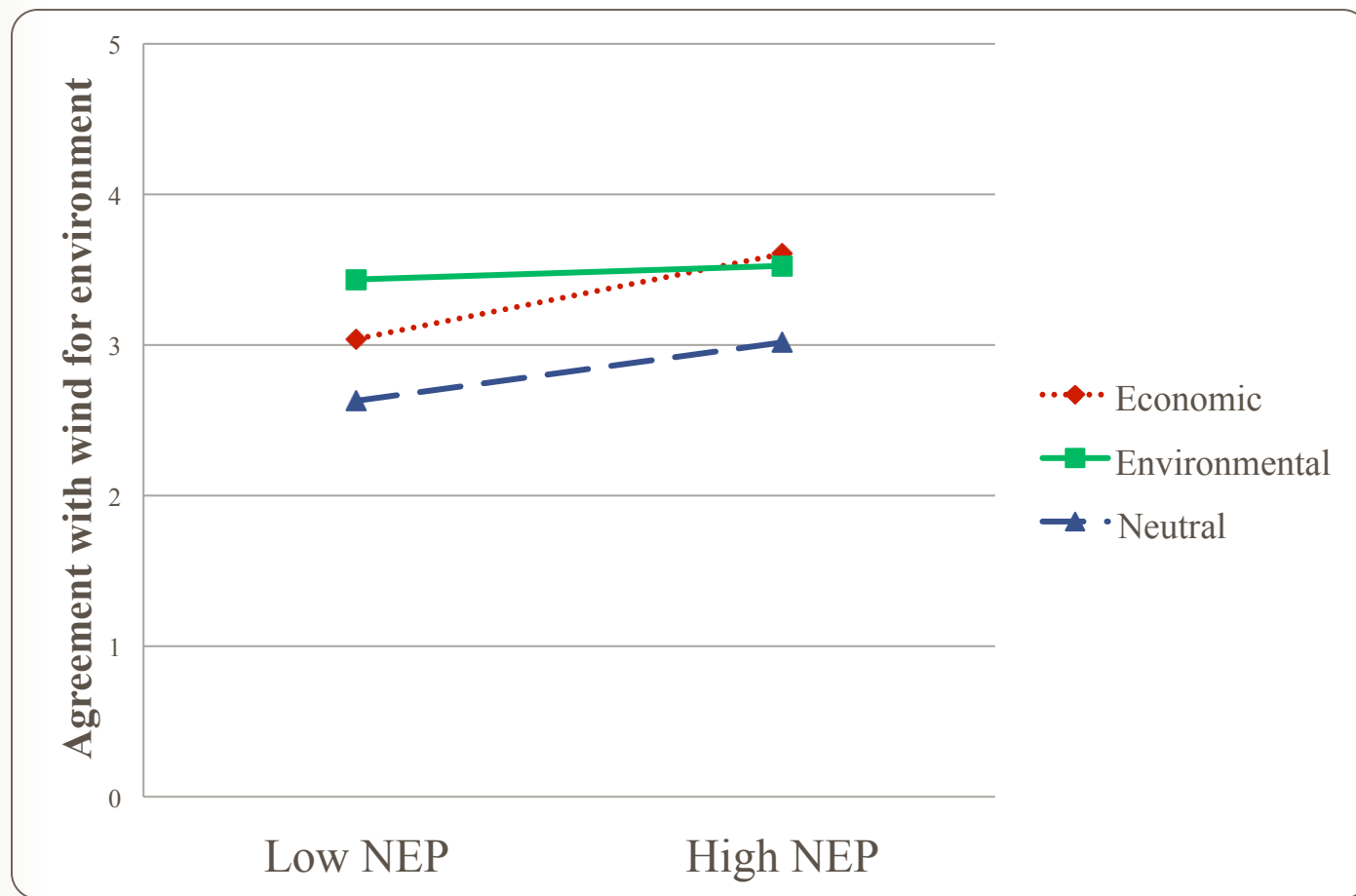
- H1: Effect of priming on agreement with wind energy/priority issue -assimilate or contrast
- No main effects of prime
 - ‘agree with video view’ ($F(2,91) = .473, p > .62$),
 - ‘agree economic’ ($F(2,91) = 1.21, p > .30$)
 - ‘agree environmental’ ($F(2,91) = 1.62, p > .20$).



Results: Hypothesis 2

- H2: NEP will moderate assimilation of prime
- No significant models for 2 of 3 DVs:
 - Agree video view: ($R^2=.04$, $F(3,74)=.89$, $p>.45$)
 - Agree economic: ($R^2 = .03$, $F(3,74)=.80$, $p>.49$)
- Agree Environmental
 - Main effect of environmental prime ($\beta=.27$, $SE=.31$, $p<.04$)
 - No moderation by NEP

Results: Hypothesis 2



Results: Hypothesis 3

■ H3: Environmental Motivation moderation

Variable	Unstandardized Coefficient	Standardized Coefficient	P-Value
Agree Video View			
	<u>Main Effects</u>		
Economic Prime	.04	.03	.83
Environmental Prime	.14	.10	.40
Extrinsic Motivation	.01	.22	.08
Intrinsic Motivation	.01	.18	.17
	<u>Two-Way Interactions</u>		
Econ Prime*IM	.02	.17	.27
Econ Prime*EM	-.001	-.007	.96
Env Prime*IM	-.006	-.06	.73
Env Prime*EM	.001	.009	.95
IM*EM	.001	.26	.03
	<u>Three-Way Interactions</u>		
Econ Prime*IM*EM	.00	-.01	.94
Env Prime*IM*EM	.00	.08	.55

Results: Hypothesis 3

■ H3: Environmental Motivation moderation

Agree Environmental

Main Effects

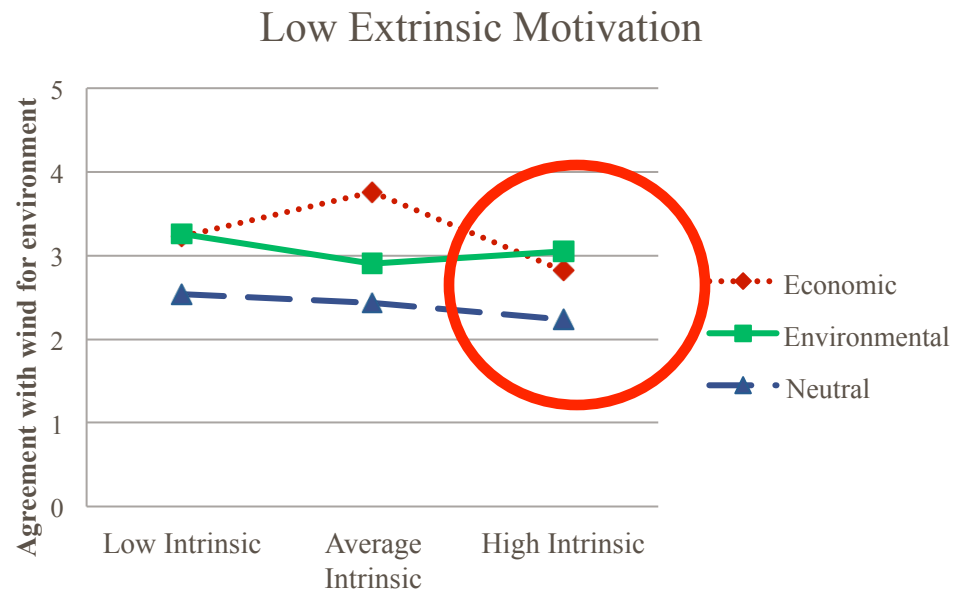
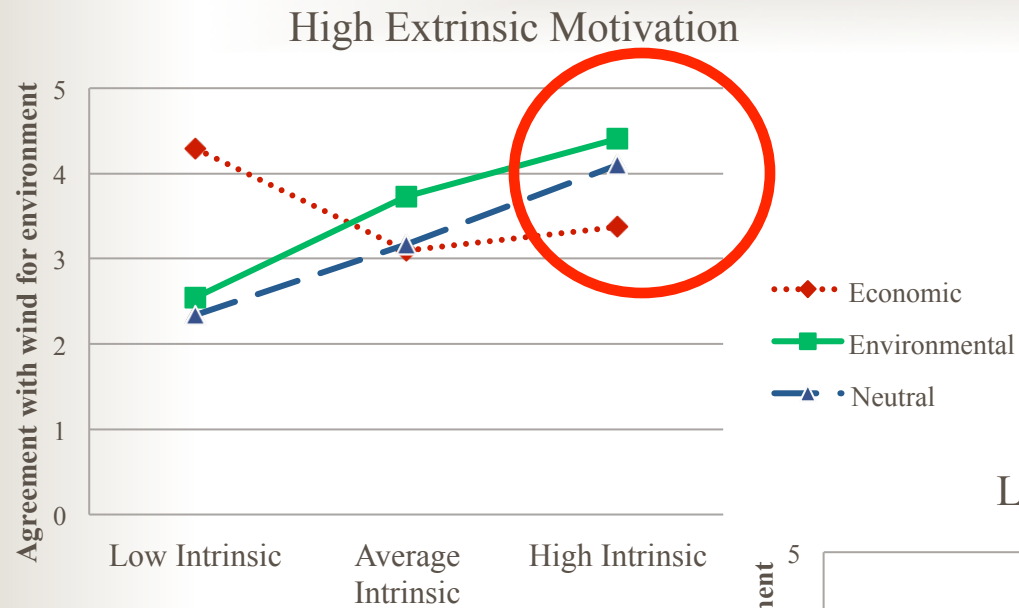
Economic Prime	.20	.08	.48
Environmental Prime	.43	.174	.13
<i>Extrinsic Motivation</i>	.03	.30	.02
Intrinsic Motivation	-.001	-.006	.96

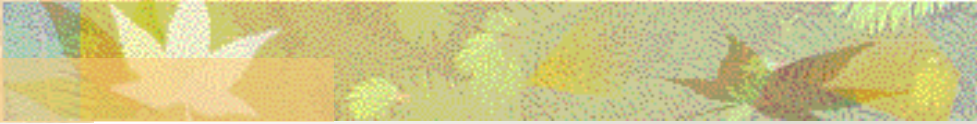
Two-Way Interactions

Econ Prime*IM	-.031	-.14	.35
Econ Prime*EM	-.018	-.09	.56
Env Prime*IM	.014	.08	.63
Env Prime*EM	-.022	-.12	.47
<i>IM*EM</i>	.003	.36	.004

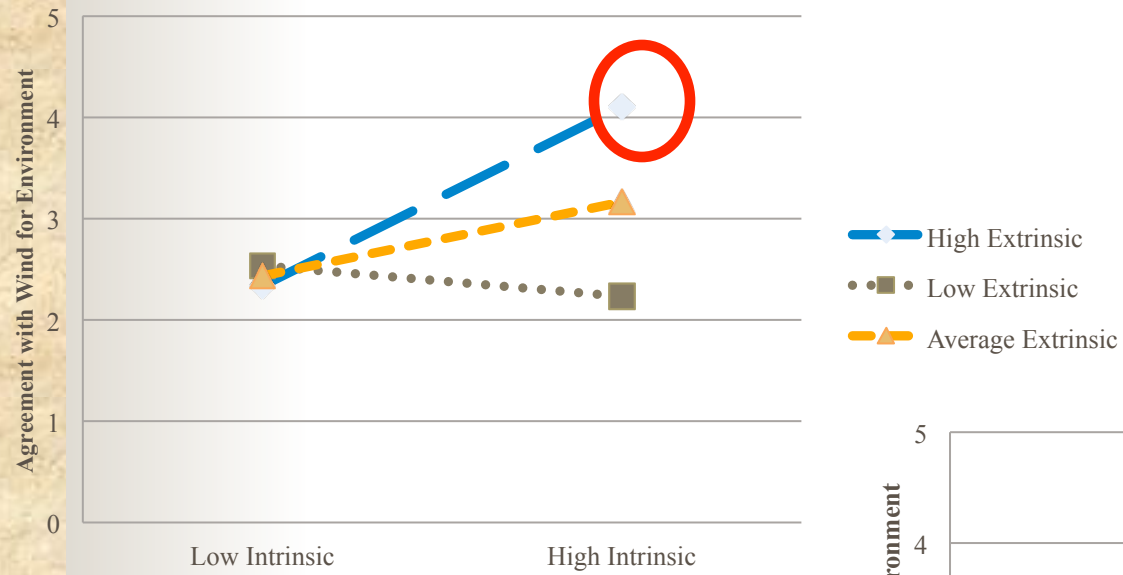
Three-Way Interactions

<i>Econ Prime*IM*EM</i>	-.005	-.30	.03
Env Prime*IM*EM	-.000	.003	.98

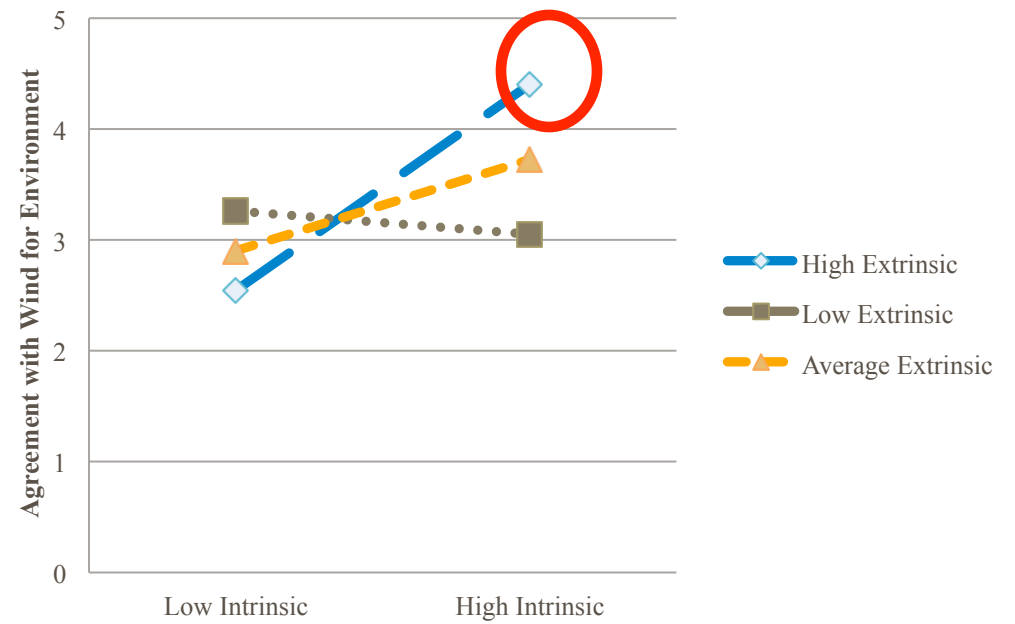




Neutral prime



Environmental Prime





What does this mean?

- Environmental Motivation matters!
 - Let's not neglect it anymore.....
- Evidence of Attitude Accessibility Model
- Harness the power of extrinsic motivation



Where do we go from here?

- Does motivation work the same way in private sphere behaviors?
- What does this mean for spillover and licensing?
 - Group norms, sources of norms

Thank you



Photos courtesy of State of Maine Fall Photo contest <http://www.maine.gov>



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Questions or Comments?

Maine's Sustainability Solutions Initiative: www.umaine.edu/ssi