# Integrating cognitive and affective human dimensions research: The Mental Hierarchy

Maarten H. Jacobs, Socio-Spatial Analysis, Wageningen University, NL

Jerry J. Vaske, Human Dimensions of Natural Resources, Colorado State University, USA

An important goal of Human Dimensions of Wildlife Research is to understand, explain, and predict human thought about and responses to wildlife

Research guided by the "Cognitive Hierarchy" has advanced this knowledge

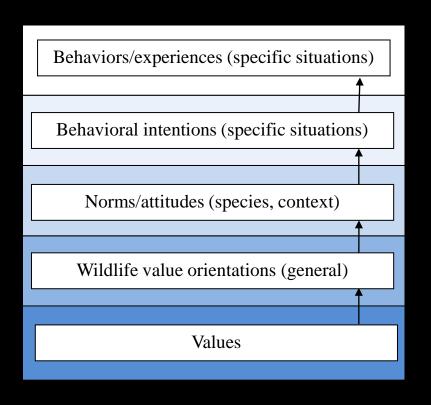
### Goal of this presentation

To present a theoretical framework that could:

- Guide the study of emotions toward wildlife
  - Integrate knowledge about cognitions and emotions

## the Mental Hierarchy

# The cognitive hierarchy is based on the principle of a hierarchical organisation of cognitions

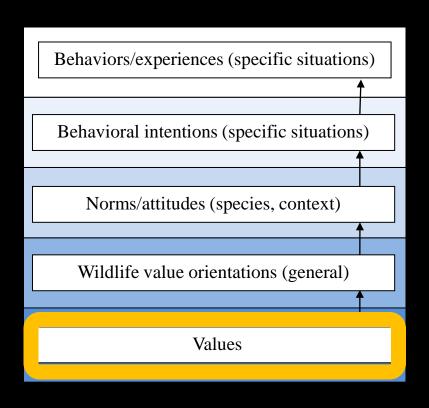


Numerous
Faster to change
Peripherical
Specific to situations



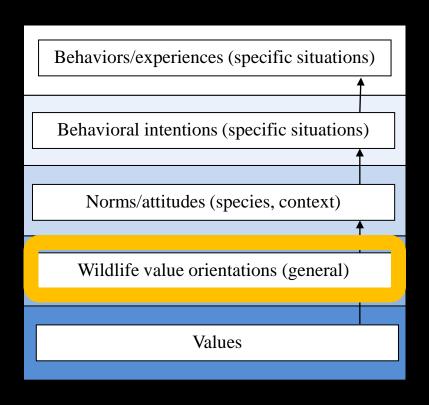
Few in number
Slow to change
Central to beliefs
Transcend situations

# Values: desirable end states, modes of conduct, or qualities of life that we find important



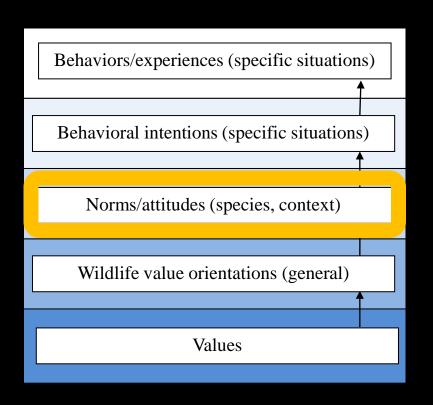
E.g.:
Freedom
Security

# Wildlife value orientations: patterns of basic beliefs that give meaning to values in the context of wildlife



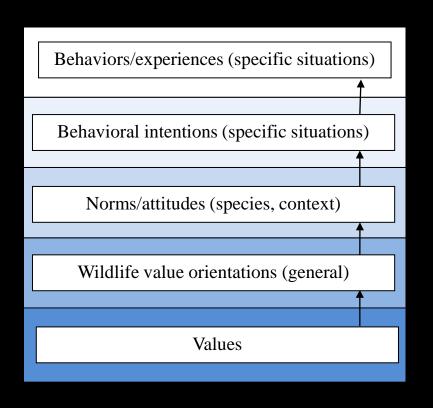
E.g.: Mutualism Domination

# Attitudes: mental dispositions to respond favorably or unfavorably to an object



E.g.:
Attitudes toward reintroduction of wolves in RMNP in 2012 by NPS

# Empirical studies have demonstrated that general WVOs predict specific attitudes or norms



E.g.:
Acceptance of
management
actions, up to 50%
of variability
explained by WVOs

# What about the other 50% or more?













# What about the other 50% or more?



Perhaps, emotions?

### Principles and questions

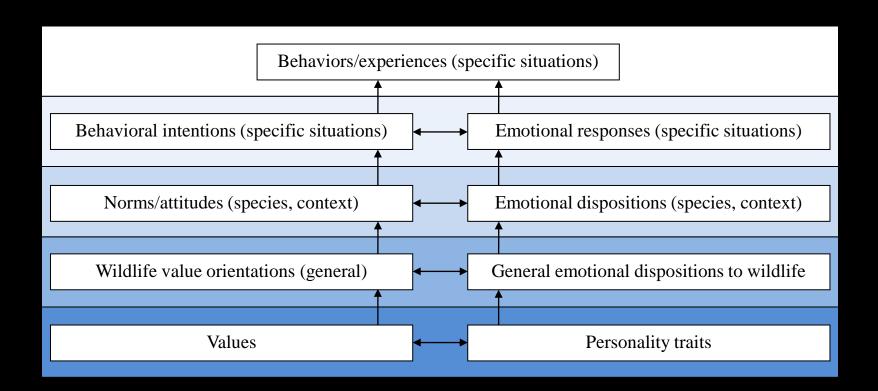
#### **Principles**

- The cognitive and the emotional system are distinctive but interacting systems in the brain
- The state trait distinction →
   emotional responses emotional dispositions

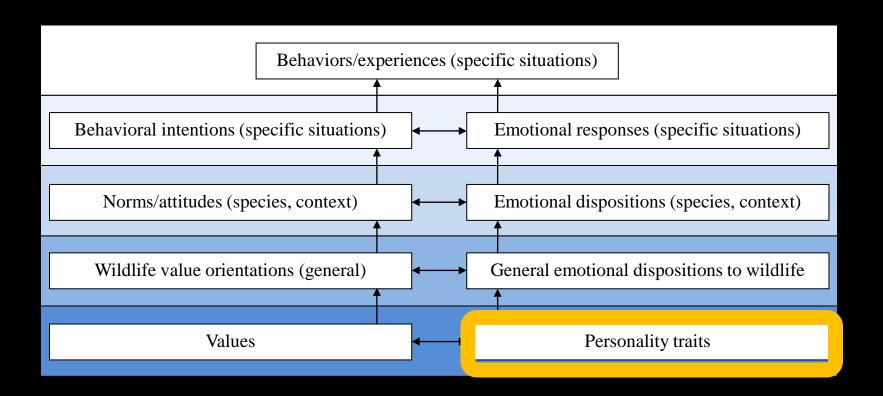
#### Questions

- 1. Does the hierarchy principle hold for emotions?
- 2. Is it possible to integrate an account of emotions with the cognitive hierarchy?

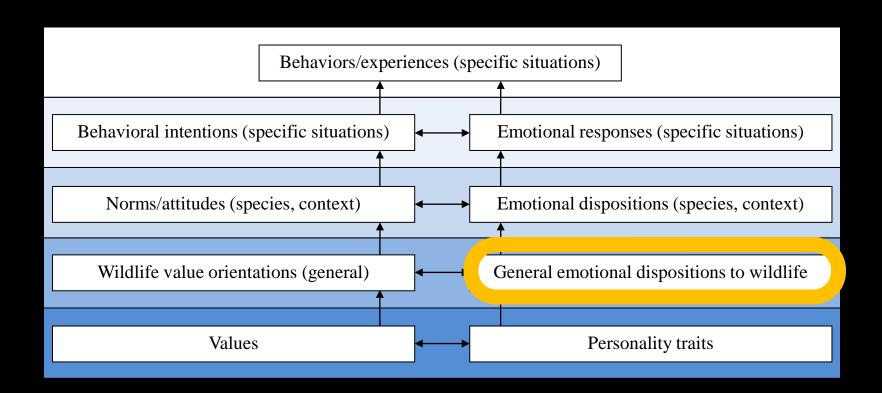
## The mental hierarchy



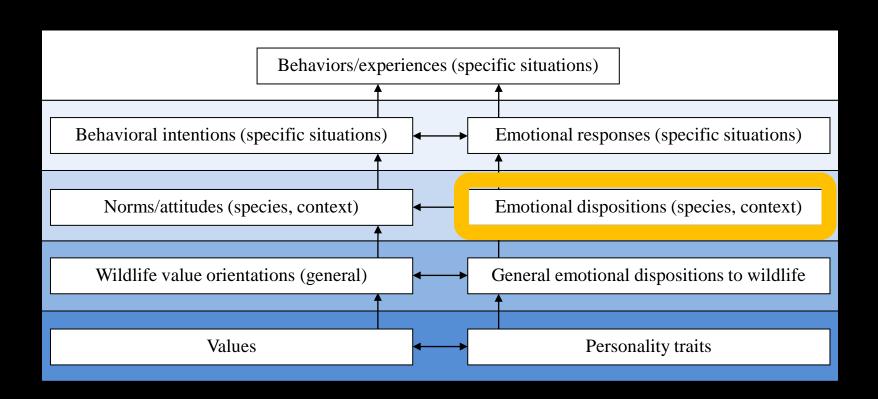
### **Personality traits**



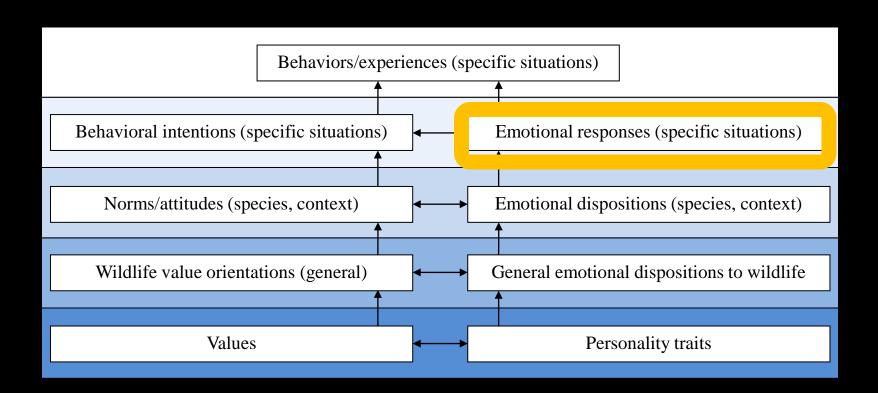
## General emotional dispositions toward wildlife



## Specific emotional dispositions toward species in context



### **Emotional responses**



### Scientific questions

#### "Vertical" questions, e.g.:

- To what extent do personality variables influence emotional dispositions and responses?
- Do emotional dispositions mediate between personality traits and emotional responses?

#### "Horizontal" questions, e.g.:

How are emotional dispositions related to cognitions?

#### Methodological questions, e.g.:

 Can general and context-specific emotional dispositions toward wildlife be empirically differentiated?

### **Questions and discussion**

