

Out of this Worldview:

When aliens invade our experience of nature

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Stand of *A. mearnsii*, Baviaanskloof

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Presentation Outline

1. Research Questions & Methods
2. Meaningful Nature Experiences: Relevance
3. Out of this Worldview: Biocultural Diversity
4. Results: Invasive Aliens & Nature Experience
5. Results: In-situ Case Study
6. Results: Invasive Reactions & Profiles
7. Words of Caution
8. How to Educate?
9. Take Home Messages

Key Questions

1. What is the current cross-cultural evidence base for meaningful / profound experiences with nature? How do they influence one's 'connectedness with nature'?

2. What is the influence of ecological change (focusing on alien invasive species) on the integrity, frequency & richness of meaningful nature experiences (MNE)?

3. What insights from 1 & 2 can we integrate into (tertiary) education curricula / programmes aimed at:

a) nature connection (awareness & behaviour change)

b) ecological restoration (on-ground action)

Mixed Research Methods

1. Online Survey (Likert Scale + Open-ended) n ~ 50
 + **Connectedness to Nature Scale**
2. In-depth Interviews (Phenomenology) n ~ 15
 + **Connectedness to Nature Scale**
3. 'Random' Public Surveys (Likert Scale) n ~ 120
 + **Connectedness to Nature Scale**
4. Case Study Groups (Before/After) n ~ 4
 + **Connectedness to Nature Scale**

Human

Convergence of Crises:

Social – Ecological -
Economic - Political - Spiritual

Crisis of Perception:

Separation

Crisis of Meaning:

Rational vs Emotional, Being

Crisis of Consciousness:

Product of our experiences &
Focus of conscious awareness

Nature

How to:
Reconnect?

Restore?

“ In order to restore nature
we must first restore
ourselves...”

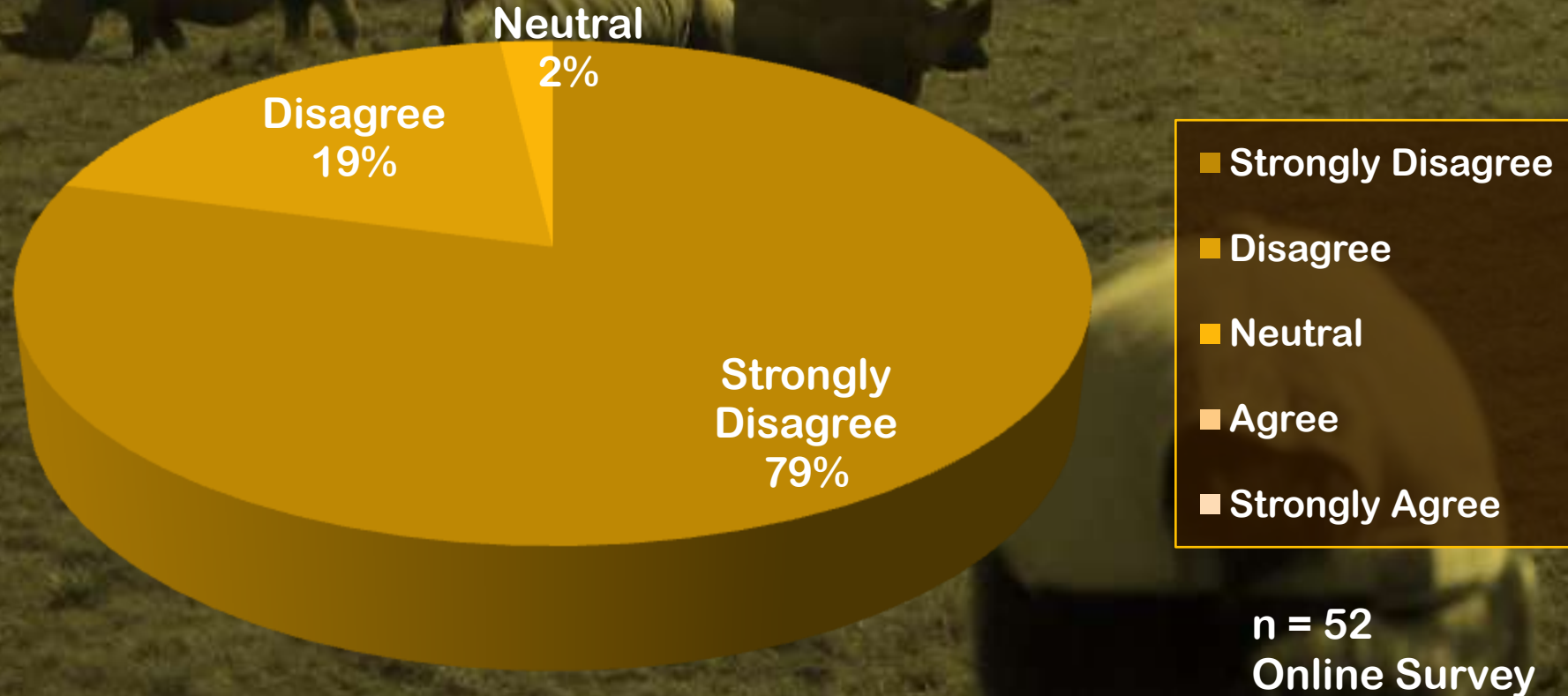
(Dr. Michelle Audouin,
at PRESENCE Landscape
Restoration Workshop 2009)

Meaningful Nature Experiences?

“Powerful exceptional experiences with nature that evoke strong emotional bonding” (Swan 2010)

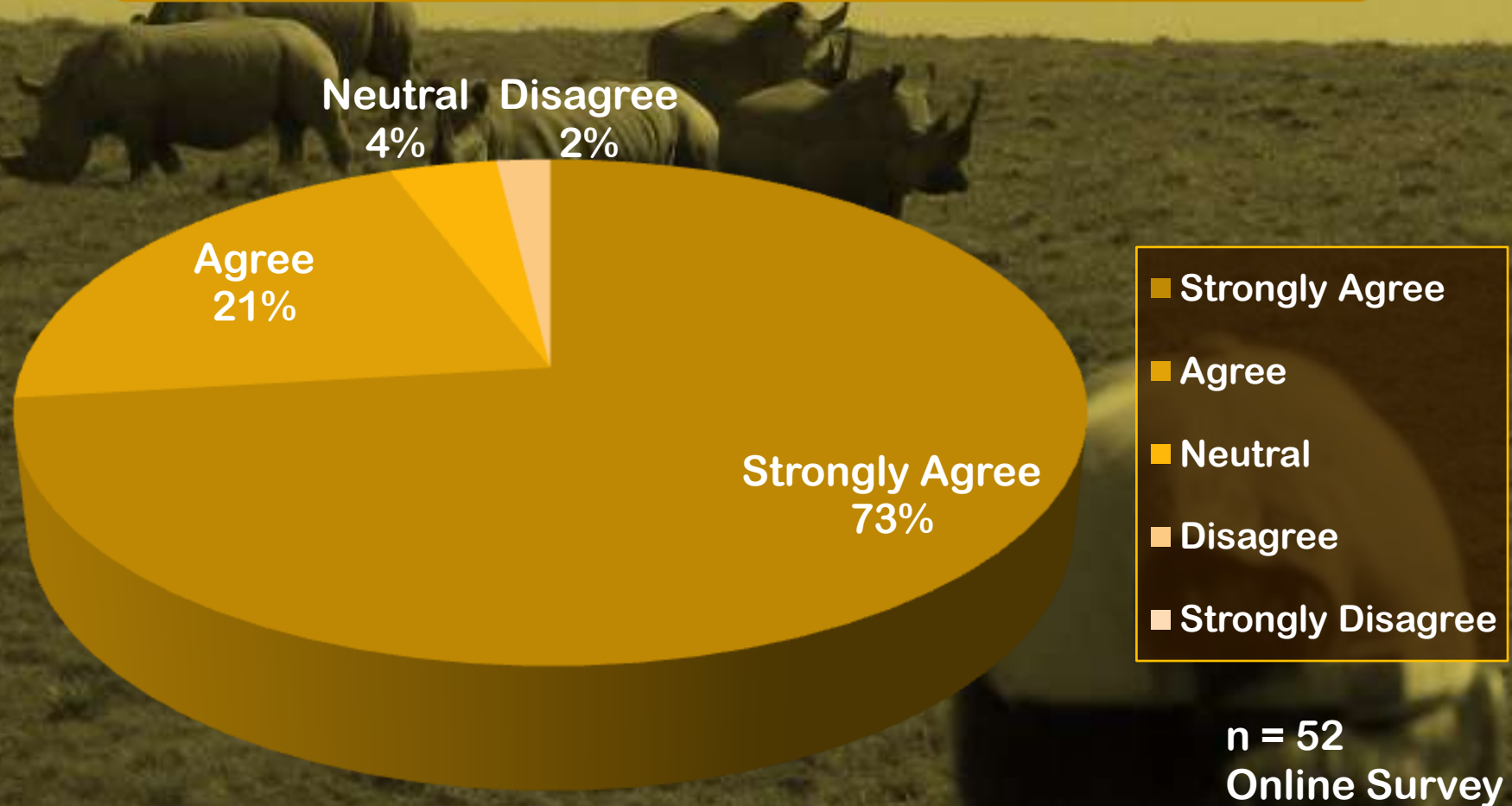


Influencing Behaviour



“The profound and meaningful nature encounters I have experienced in my life have had little or no influence on my current behaviour and actions toward nature and the environment.”


Transforming Outlook



"My meaningful nature experiences have heavily influenced, changed or transformed my outlook on life."

Motivating Restoration?

Connectedness = Land Ethic = Restoration Motivation?

A group of people, including children and adults, are standing in a desert landscape with hills in the background. A speech bubble on the right contains a quote. The scene is set in a dry, open area with sparse vegetation and a clear sky.

“My whole thing with alien plants started when I was at school at a camp way back as a 14-year-old... they showed us the hakea and the problems...and it gripped me there and then...that sparked something for me. And from then on I realised how big the threat is.”

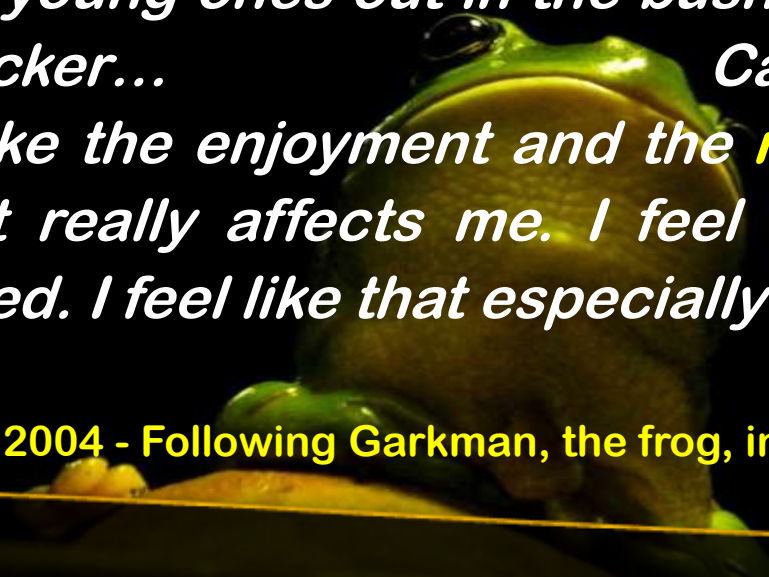
Threats to MNEs - Biocultural Links

Yolngu Aboriginal people of Arnhem Land, Australia:

**“Garkman’: Green Tree Frog vs Cane Toad (*Bufos marinus*):
Changes traditional songs, ceremonies, stories...**

*“We are upset...We feel hurt...It stops the interest of elders to take young ones out in the bush to find and show them bushtucker... Cane toads are shocking; they take the enjoyment and the **meaning** from the land. All that really affects me. I feel upset, sad, frustrated, confused. I feel like that especially for my grandchildren.”*

Source: Boll 2004 - Following Garkman, the frog, in North Eastern Arnhem Land



Biocultural Diversity Loss

Xhosa & Coloured Rural Communities of South Africa: influence of invasive alien plants (*Acacia spp.*)

- Utility (+): **Firewood, Building, Shelter...**(Kull et al 2011)
- Utility (-): **Access, Water, Medicinal, Important spp**
- Intangible: **Unhappy, unease, unpleasant energy, unsavoury events, frustration, ancestor implications**

‘Abakhwetha’ – Xhosa initiates

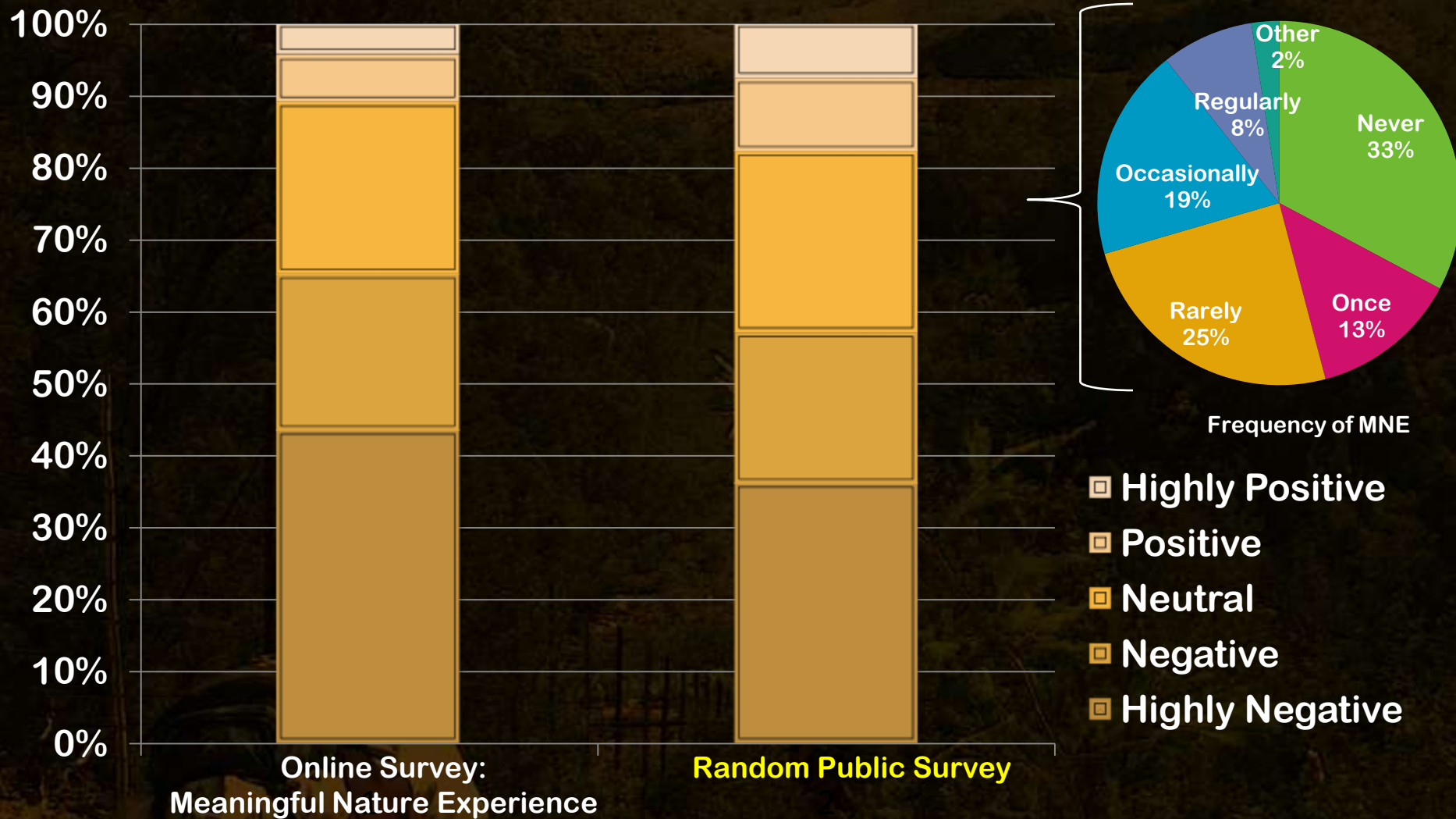
Photo credit: Tony Dold (Rhodes University) &
Kim Litje (Rhodes University / SANPAD funded)

Biocultural Diversity Loss?

“...they are no good at all because you cannot even make medicine out of it. And they are developing everywhere and now it makes other useful plants unable to grow. Because if there are some people [ancestors] there in the river, they will tell you which medicine you can go and heal people. Now these [A. mearnsii / A. saligna] are all over now - they are invading what is supposed to be. In that area now, I don't feel much happiness when I am surrounded by them because they have got an impact. It is hard to explain it.”

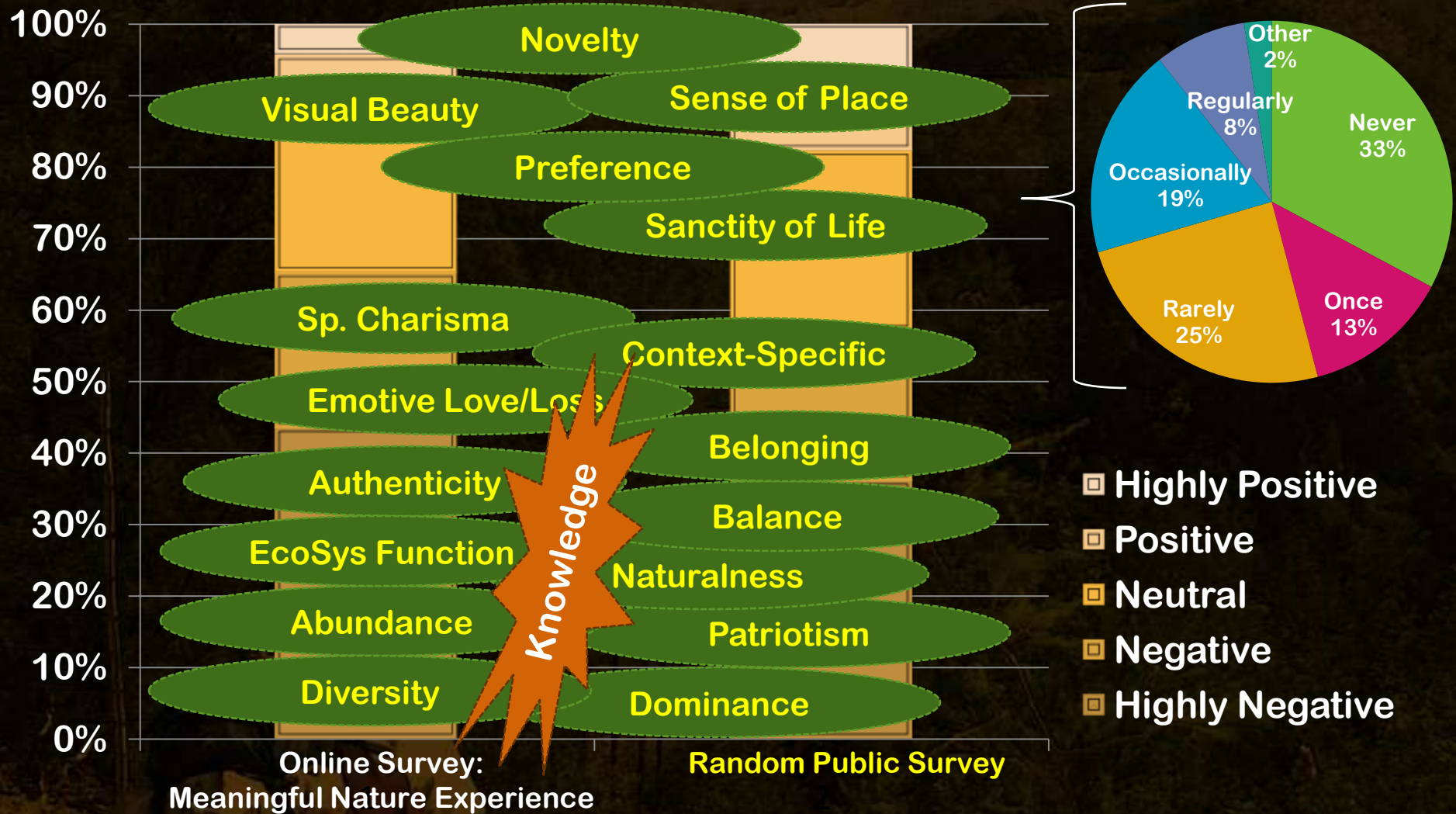


Influence on Experience



“Rate to what extent a large presence of alien/exotic species could influence the quality of a meaningful nature experience (e.g. profound wildlife encounter)”

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In-situ Case Study: 10 USA students

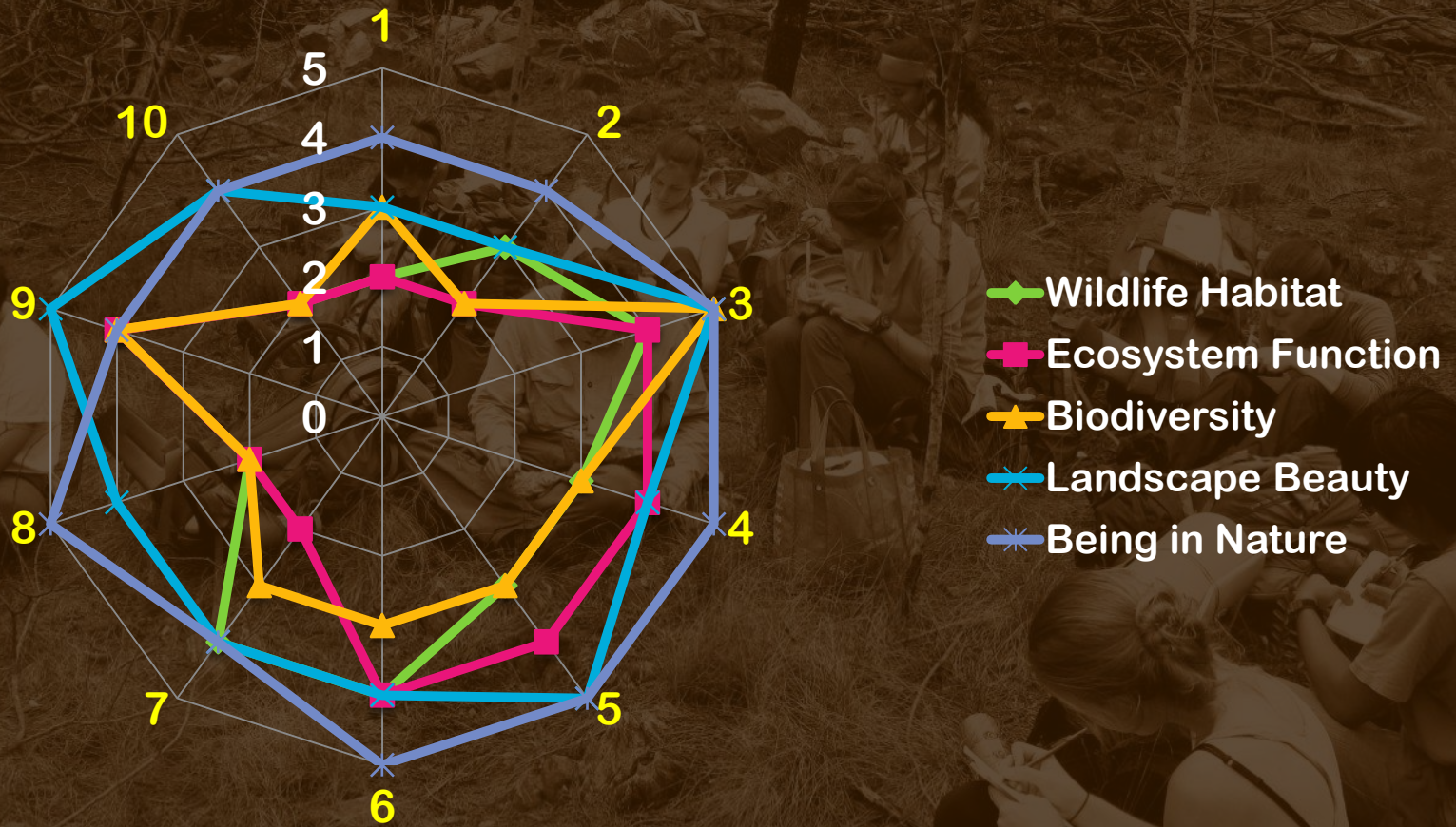
Immediate feelings experienced when in *A. mearnsii* stands



Students had no prior knowledge or experience with invasive species in South Africa; some familiar with the global issue.

In-situ Case Study: 10 USA students

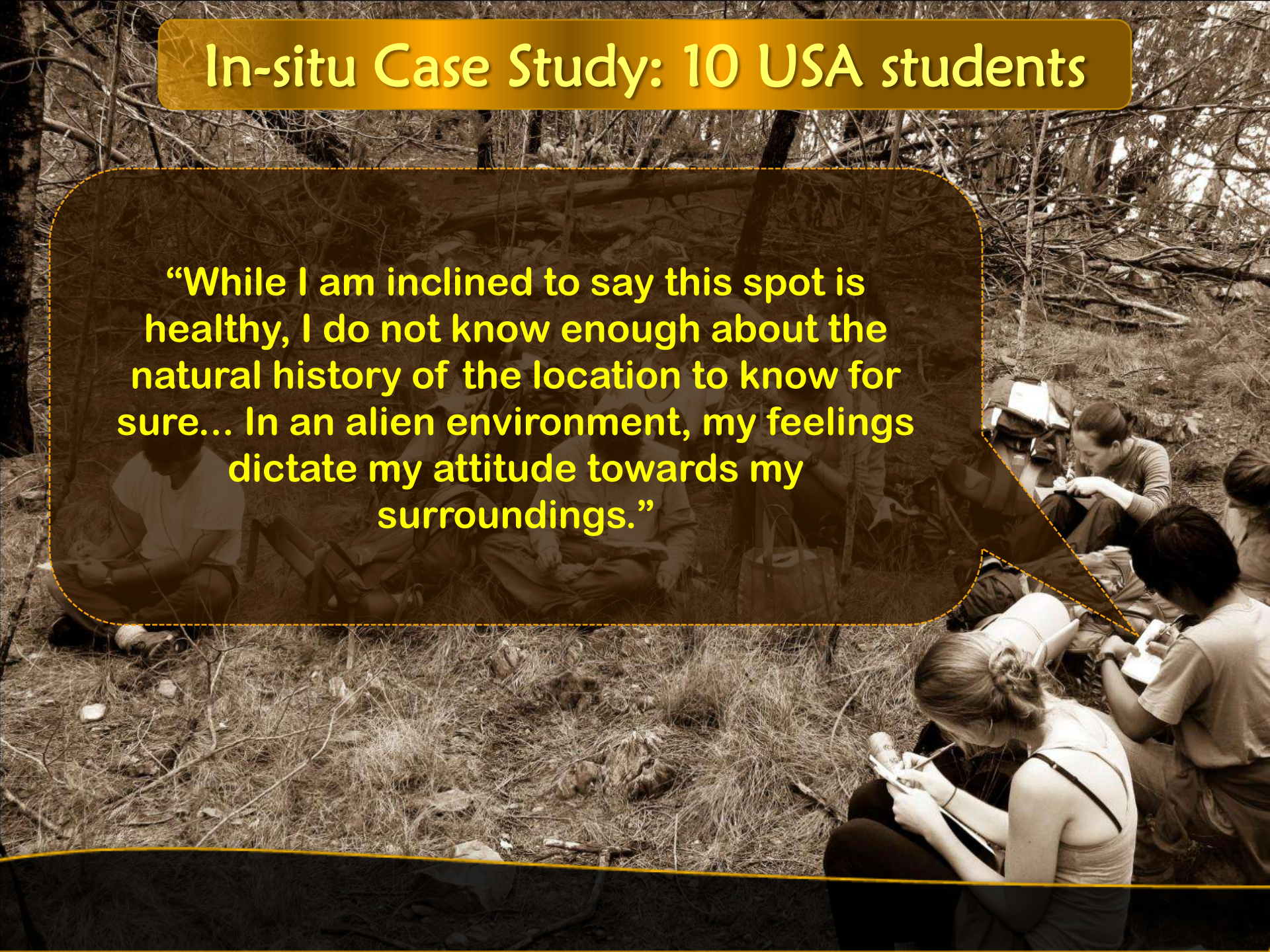
Belief to which *A. mearnsii* stand is perceived to support:



1 = Strongly Disagree 3 = Neutral 5 = Strongly Agree

In-situ Case Study: 10 USA students

“While I am inclined to say this spot is healthy, I do not know enough about the natural history of the location to know for sure... In an alien environment, my feelings dictate my attitude towards my surroundings.”



In-depth Interviews: Selected Respondents

Quadrant Classification: Attitudes Toward Invasive Species

Self-View

Systems View

Intolerance

Tolerance

"Sometimes I am hunting for...A deeply peaceful, ecstatic experience in nature...a spot that just feels, 'alive' ...I am quite deeply connected to landscape and the feeling of land... And I will never pick a place that has got exotic species... I'm not looking and thinking, 'exotic' ... if I'm going through and I find a spot and I start looking around - it is never next to an alien species – no chance."

Self-View

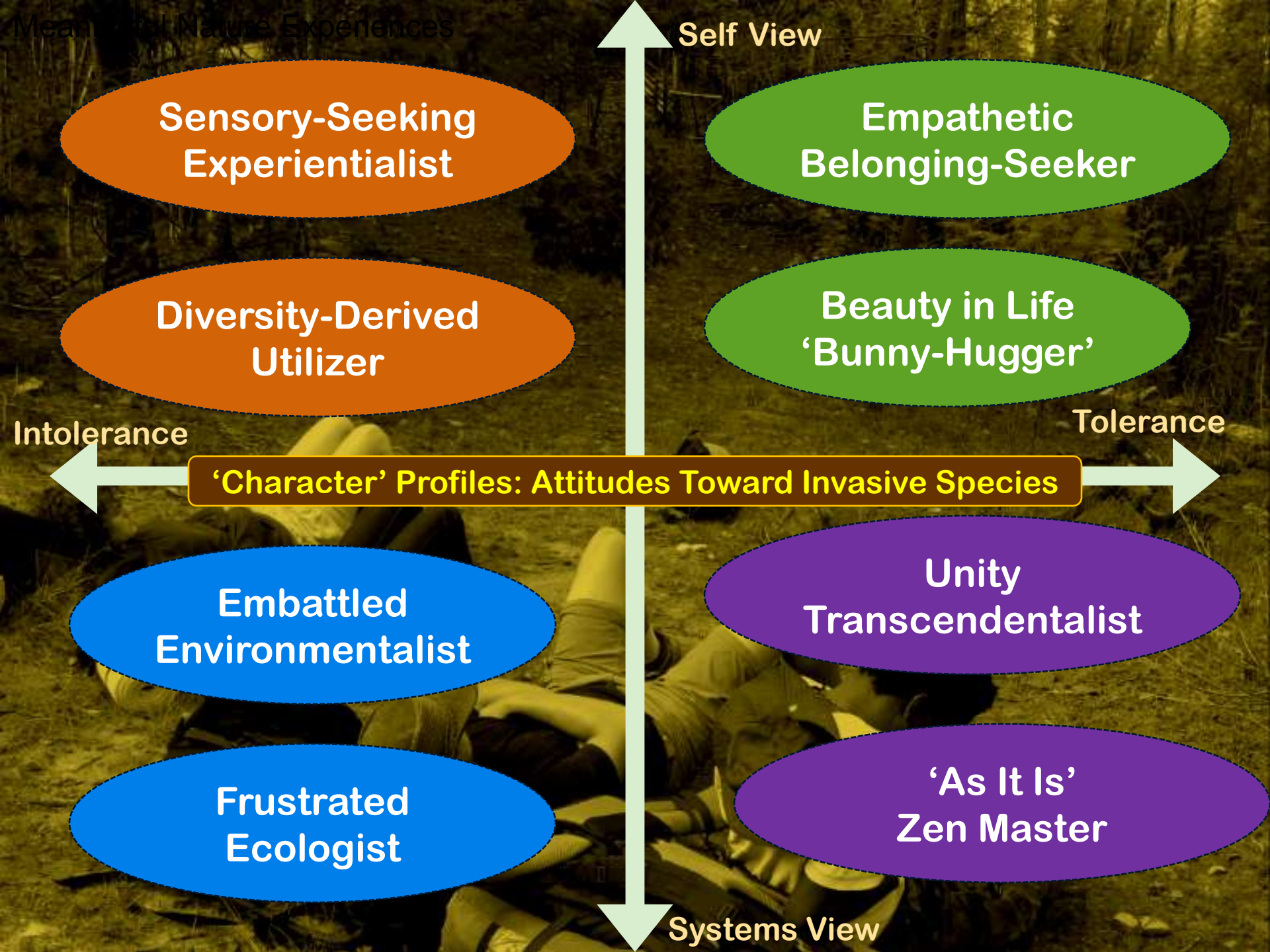
"I had probably as many useful insights in a stand of aliens as I did in a pristine situation... So I don't think that I personally learn any more, or any less if the biodiversity is local ...[or] foreign. I still think there is a lot metaphorically that I can learn. I changed a hell of a lot in terms of my attitude to invasive species... I'm not nearly as purist or rampant about the whole thing as I used to be. Because I see it as life..."

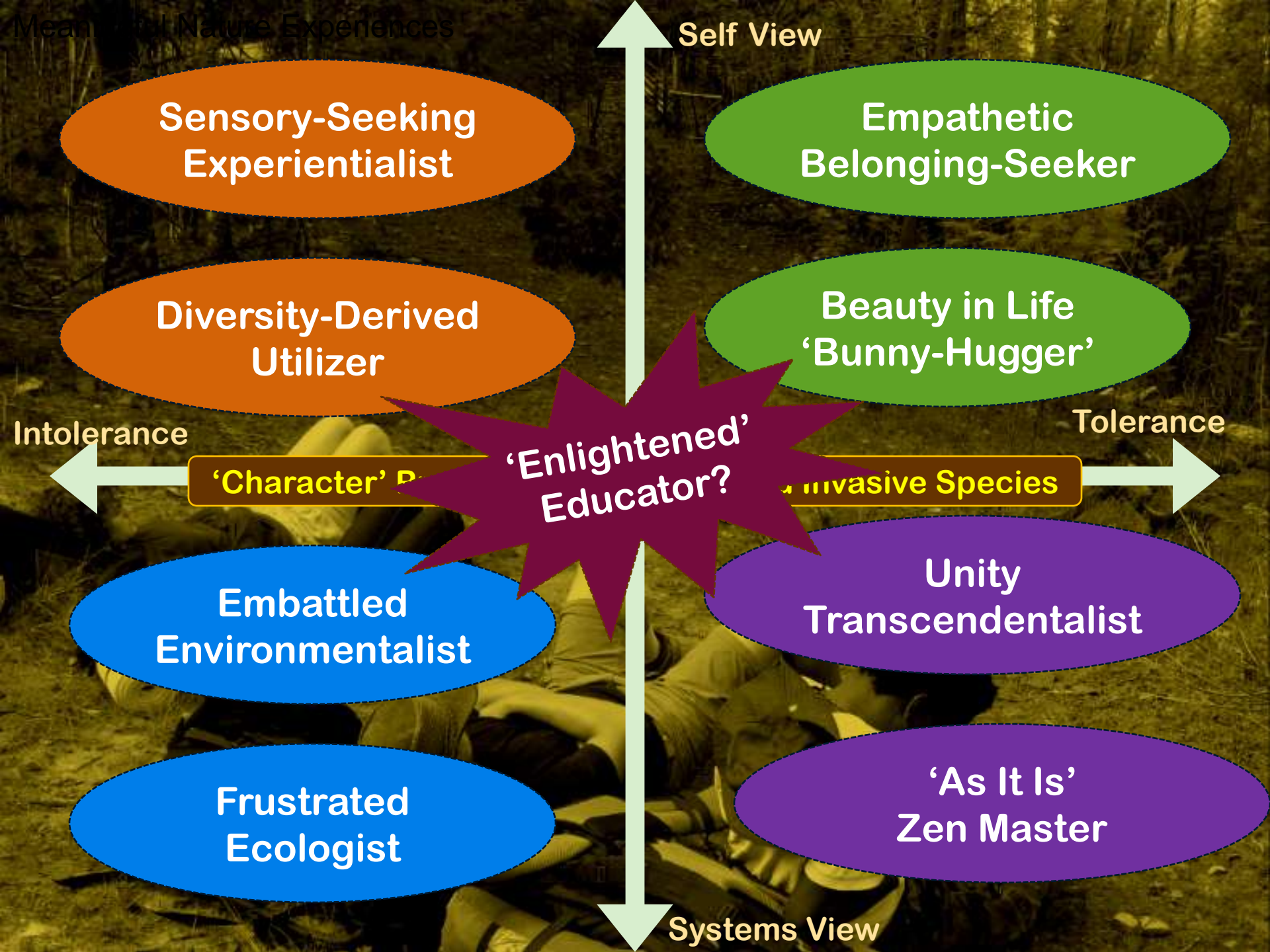
Tolerance

"I am a bit of a purist from that point of view, because I have seen the damage that these things can do... And we are losing the battle against aliens. And I've got a severe hate to some of these plants. And what I would say to these people - I would try and convince them to understand the ecology behind it."

"The unifying love that I experienced as a result of ...dropping of my sense of separateness, did not discriminate between alien or indigenous vegetation. I felt a connection... for the blade of grass next to me and the Blue Gum tree. There was no judgement about what belonged and what didn't. Each had value in that it existed."

Systems View





Cuidado!

Care with approaches to invasives which invoke:

Metaphors & Anthropomorphizing:

- Xenophobia, Capitalism, Diseased Body

Warfare Approach:

- When, Where & with Whom Appropriate?

Crisis Addiction Syndrome:

- 'Polluting Consciousness' with Negativity

How to Educate?

- Interconnectedness (Social-Ecological System)
- **Respect, Reverence & Reciprocity: Basis of Intent**
- Awakening the Senses: Experiential Learning
- **Cultural Sensitivity & Different Ways of Knowing**
- Diversity: What do we Value? Part vs Whole?
- **Hope Amidst Crisis: Role of Restoration**
 - **Reconnection & Reconciliation**

~ Vaclav Hevel

“Education is the ability to perceive the hidden connections between phenomena”

Take Home Messages

1. Meaningful Experiences linked with restorative nature connection and pro-ecological behaviour.
2. Invasive alien species (plants) largely erode integrity and richness of nature experience – but can still offer meaningful learning / insights.
3. Education is pivotal. Consideration needs to be given to the (cultural) values and ethic which underpin a 'reconnecting' educational approach.

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