

Relevant Psychological Factors for Behavioral Adaptation to Climate Change

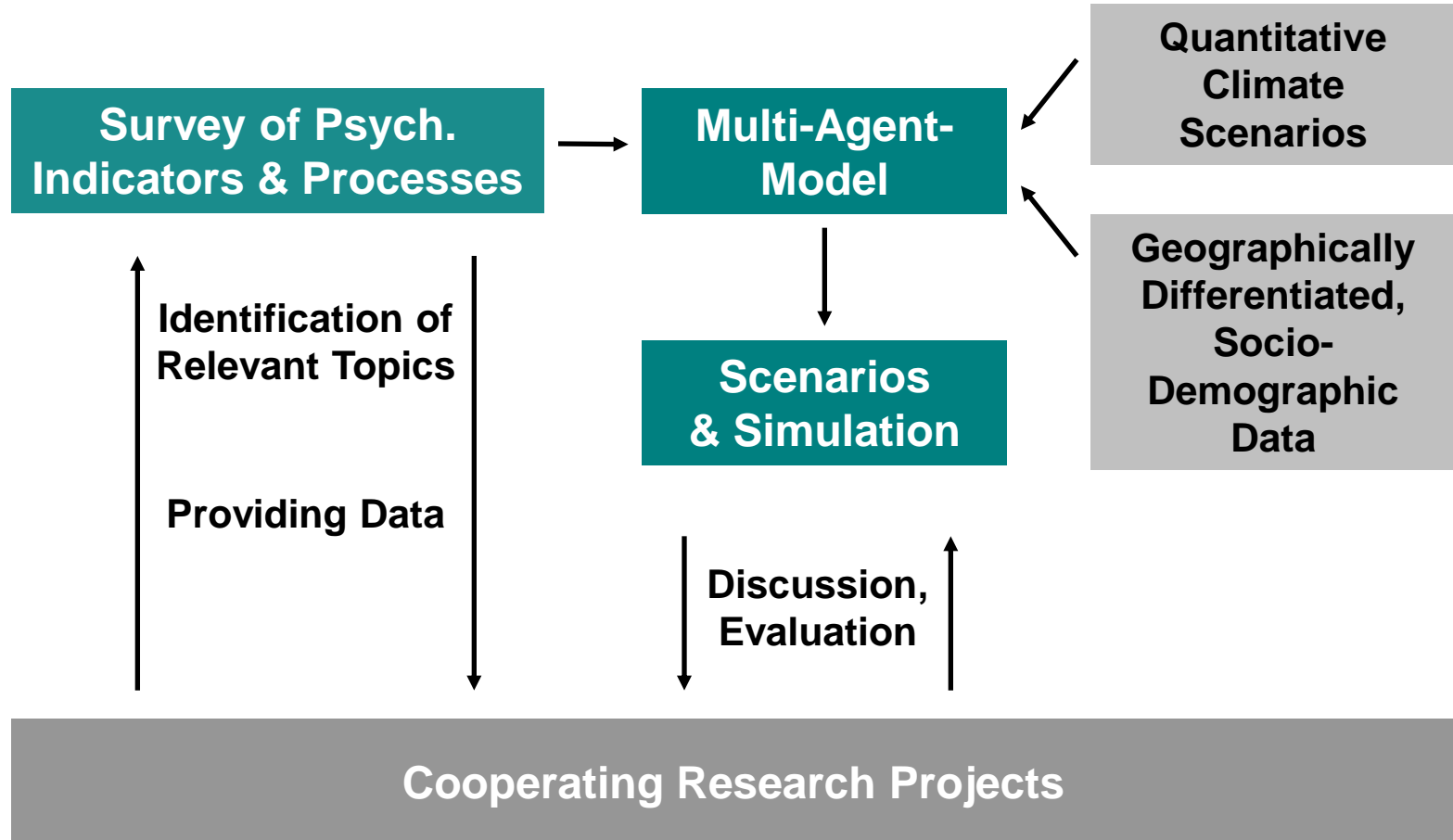
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European Climate Change Adaptation Conference - March 18 - 20, 2013
Hamburg, Germany

Outline

- 1) Project
- 2) Survey and Theory
- 3) Selected Results
- 4) Conclusion and Outlook

Project setup – KUBUS¹



¹ supporting regional adaptation to climate change by socio-scientific surveys, simulation and scenarios

Aims

- Adaptation requires the willingness to perform climate adaptation behavior
- We are analyzing...
 - The perception of climate change and risk perception
 - The behavior intention for performing climate adaptation behavior
- Challenges are...
 - Experiencing climate change
 - Storm, heavy rain, heat waves
 - Temporal trap
- Meaning for the empirical survey
 - Which variables have an impact on different behavioral intentions?
 - Are there differences between lifestyles regarding the willingness to perform climate adaptation behavior?

Excerpt of the Content of the questionnaires

- ***Perception of Climate Change***
 - Which extreme weather conditions and consequences do people primarily associate with climate change?
 - Estimated temporal occurrence of extreme weather situations (storm, heat, heavy rain)
- ***Willingness to perform climate adaptation behavior***
 - Theory of Planned Behavior – specific behavior asked:
 - performing short- and long-term behavior
 - relocation
 - information seeking
 - contract insurance against natural hazards
 - neighborly support in general and during heat waves
 - car sharing / neighborly car pools for daily commute
- ***Personal traits/characteristics***
 - CFC (consideration of future consequences; Strathman et al., 1994)
 - Lifestyle (Sinus®)
 - Social Demographics

Sample



Pilot
Study

Main Sample

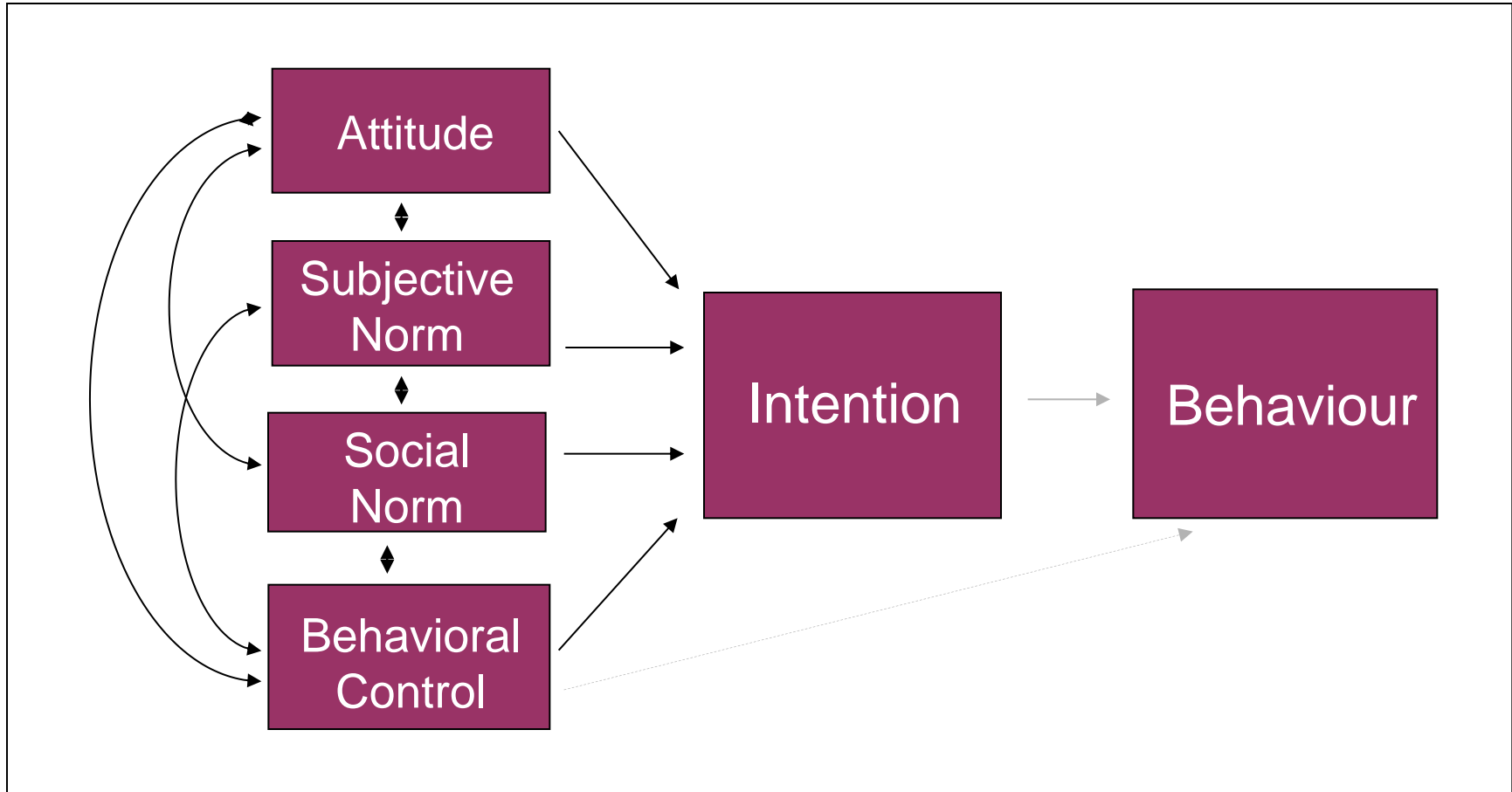
Survey 1 (2010)

Survey 2 (2011)

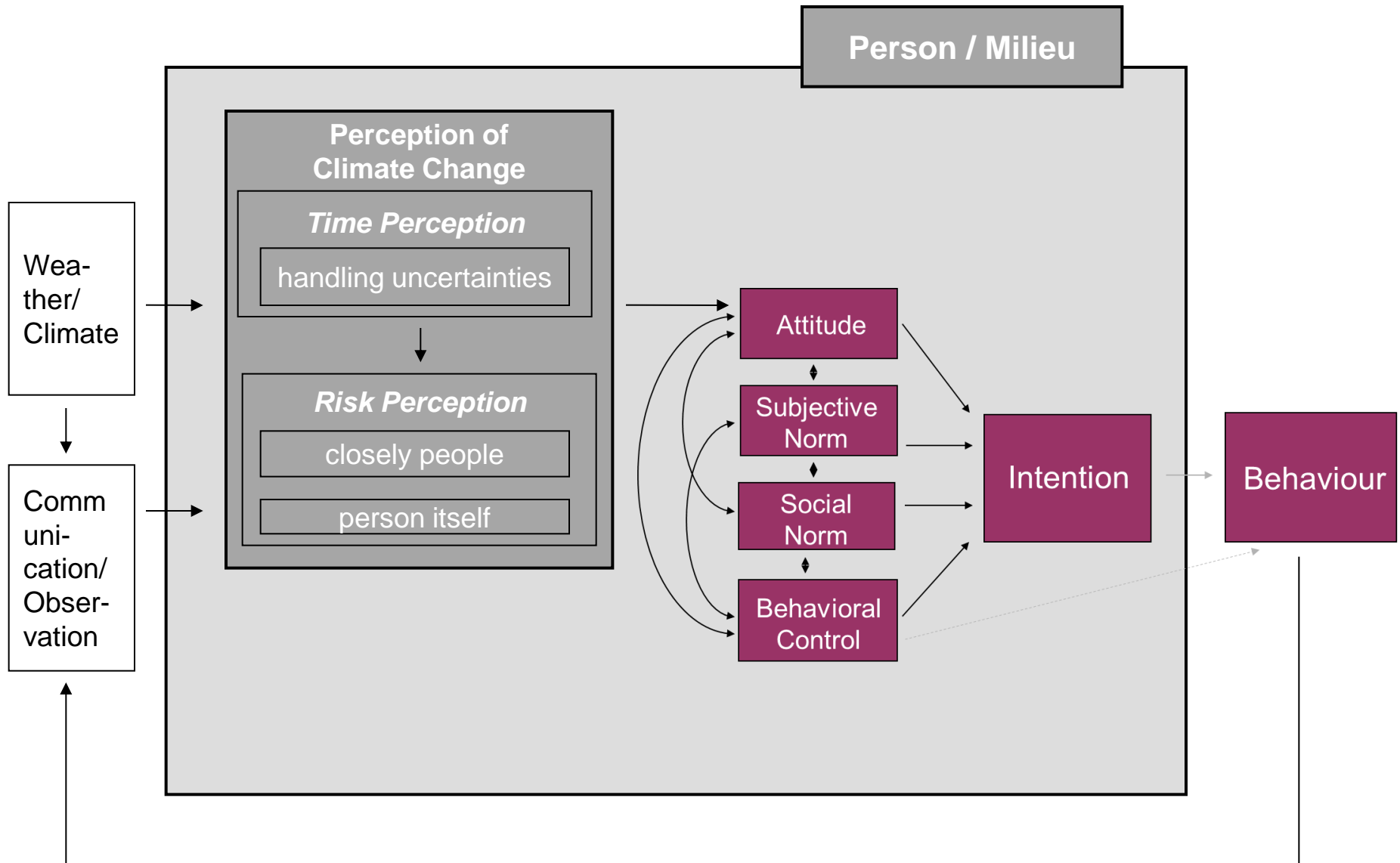
Survey 3 (2012)

	Pilot Study	Survey 1 (2010)	Survey 2 (2011)	Survey 3 (2012)
Sample Size	N = 59 (200)	N = 446 (2050)	N = 446 (2023)	N = 485 (2336)
Gender Distribution	N _{female} = 35 (59%)	N _{female} = 249 (56%)	N _{female} = 230 (52%)	N _{female} = 273 (56%)
	N _{male} = 24 (41%)	N _{male} = 196 (44%)	N _{male} = 211 (48%)	N _{male} = 210 (43%)
Mean age	47 (SD = 15.18)	50 (SD = 16.91)	52 (SD = 16.88)	48 (SD = 17.12)

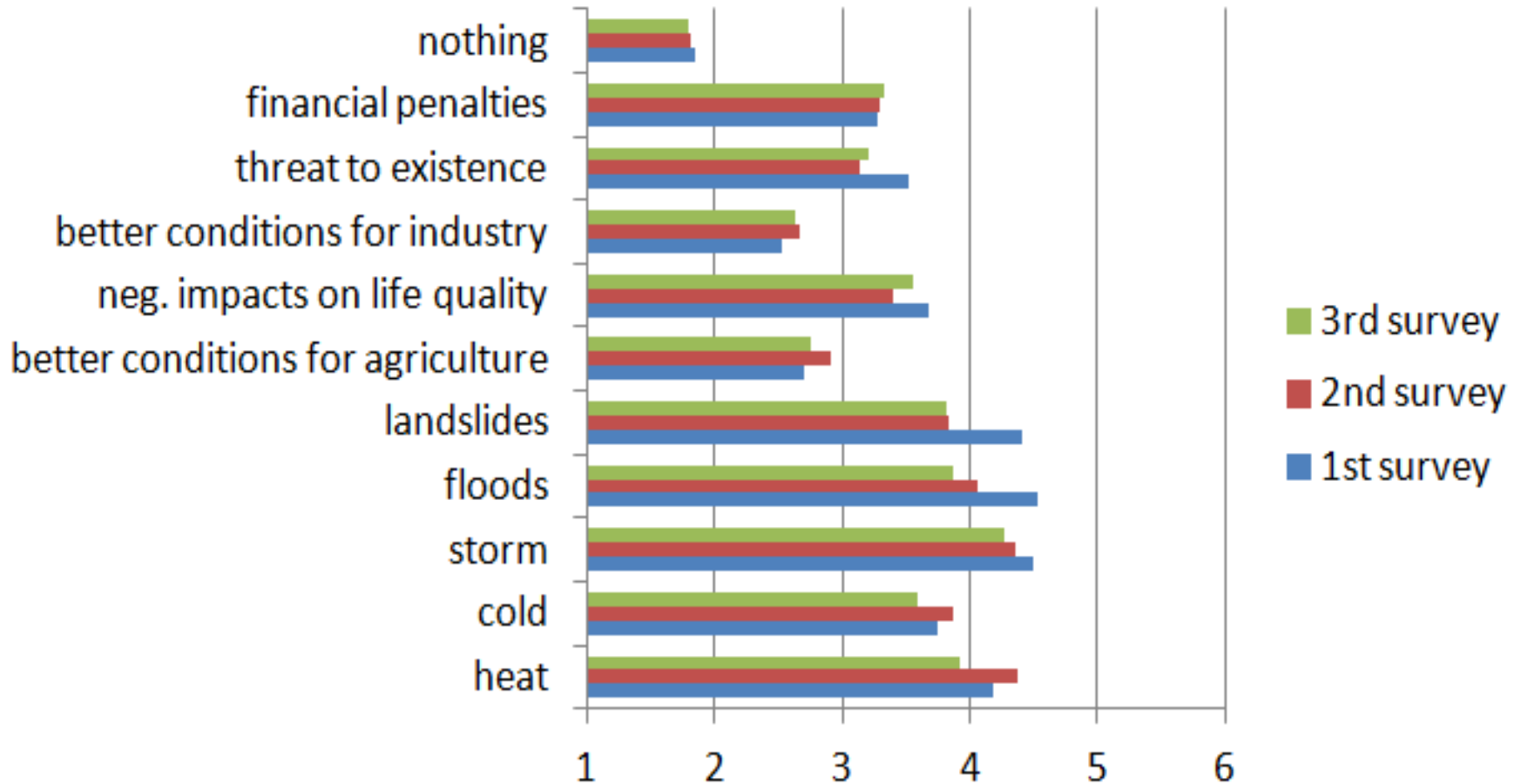
Extension of the theory of planned behavior¹



¹ Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

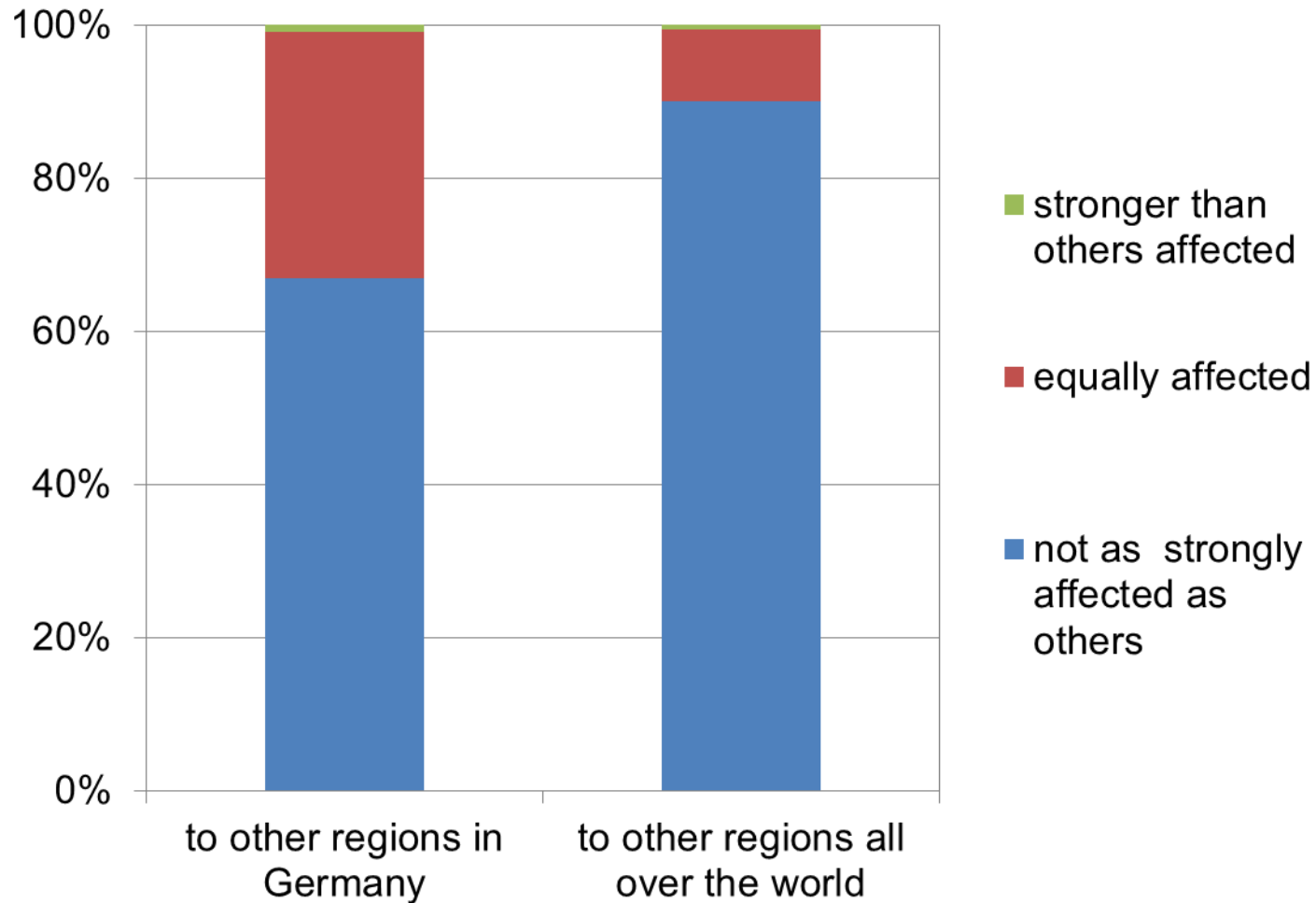


What do you associate with climate change in Northern Hesse?

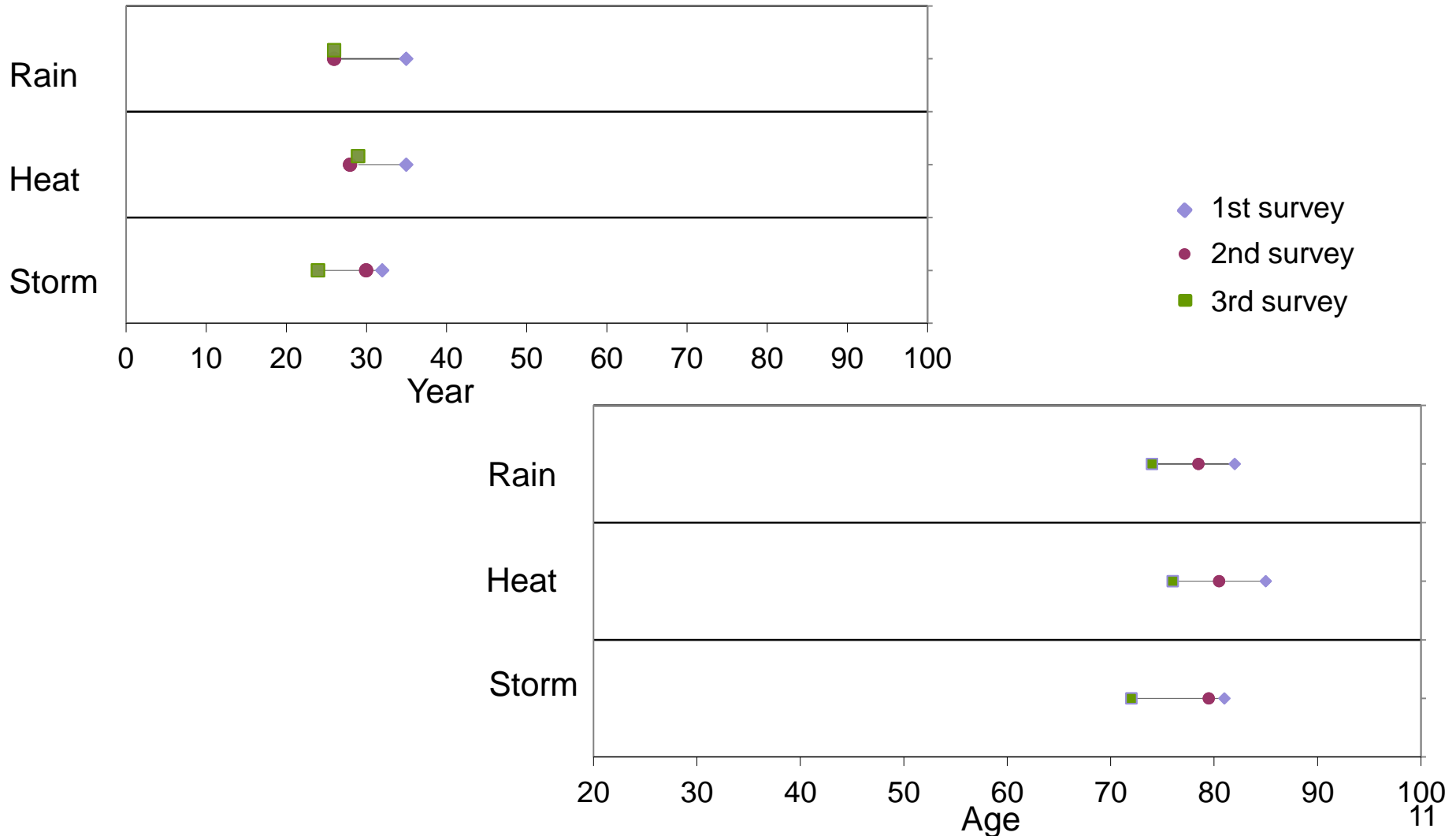


1="strongly disagree"; 2="disagree"; 3="disagree more likely than not"; 4="agree more likely than not"; 5="agree"; 6="strongly agree"

Do you feel strongly affected by climate change in your region in comparison to other areas? – 3rd survey

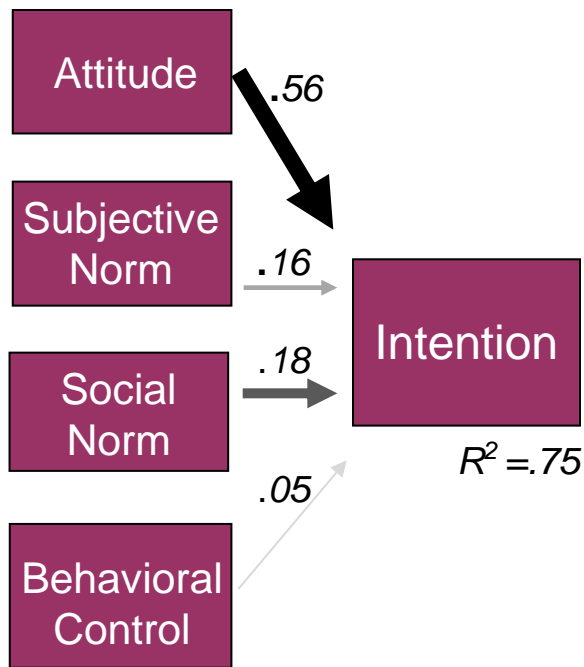


At which point in time do you think, that extreme wheather events will occur in your region?

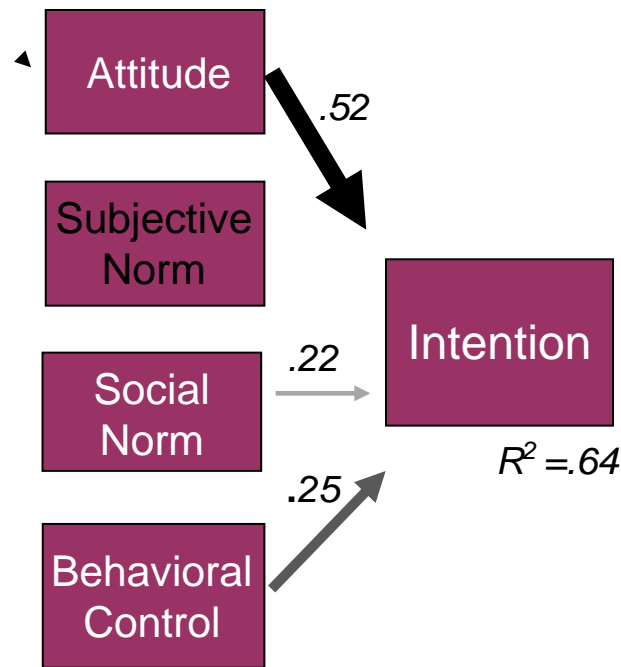


Extended TPB – relevant factors for specific adaptation behavior – 2nd survey

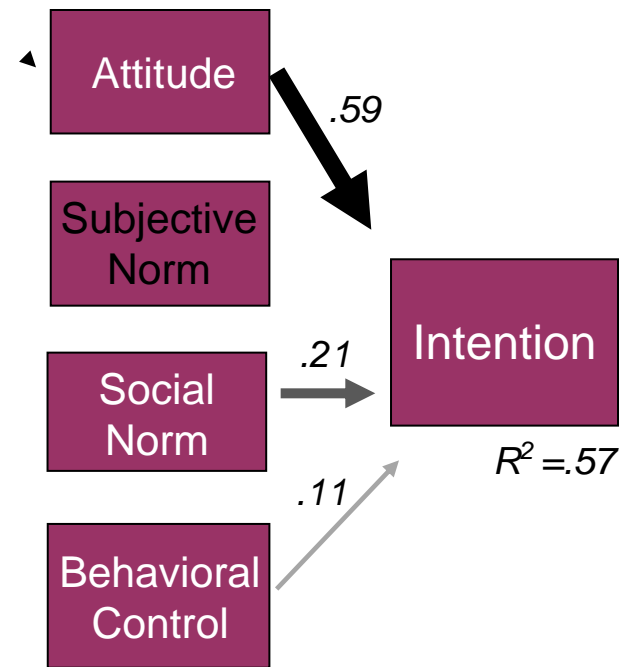
Relocation



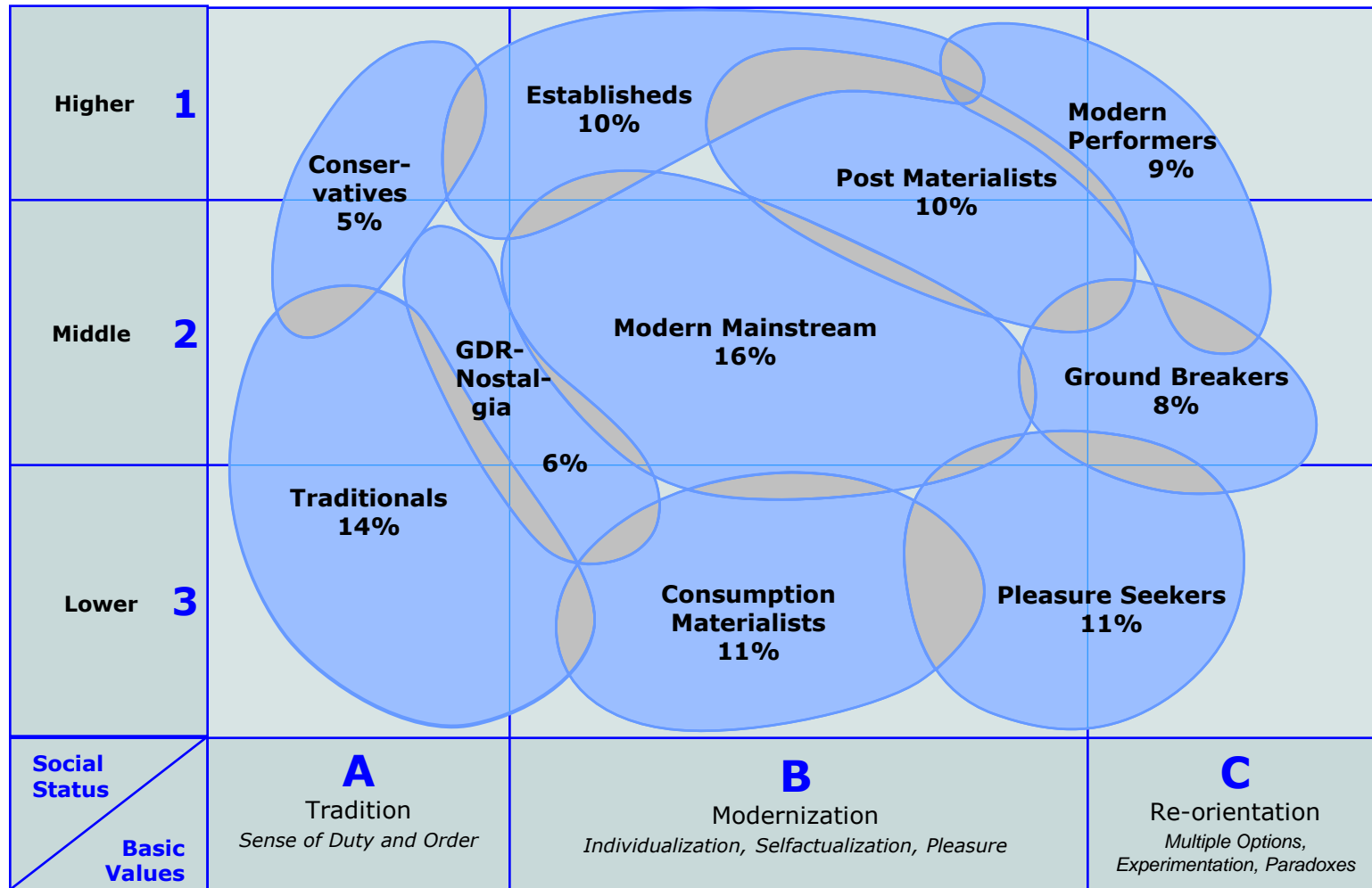
Long-Term Behavior



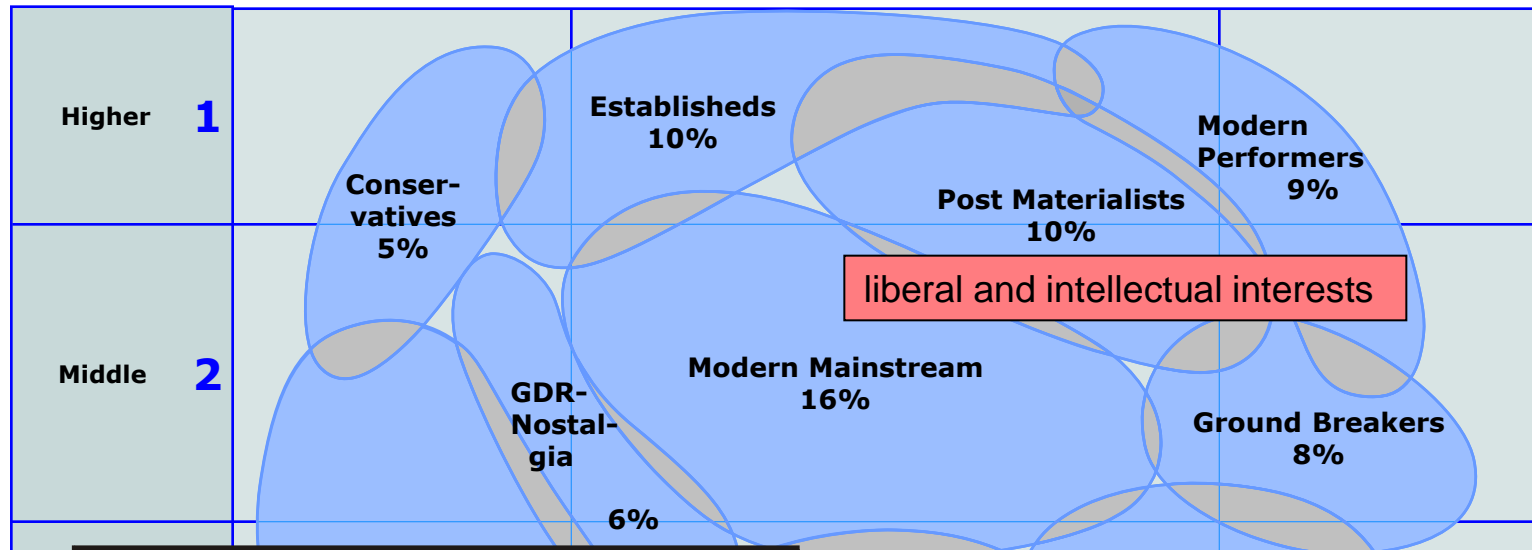
Short-Term Behavior



10 SINUS® Milieus – 4 Lifestyles



10 SINUS® Milieus – 4 Lifestyles



Post-Materialists

Profile:

- age = young families
- income = middle to high
- value "modern" = high
- value "conservative" = low
- importance "price" = low to middle
- importance "environment" = middle to high
- importance "peers" = low

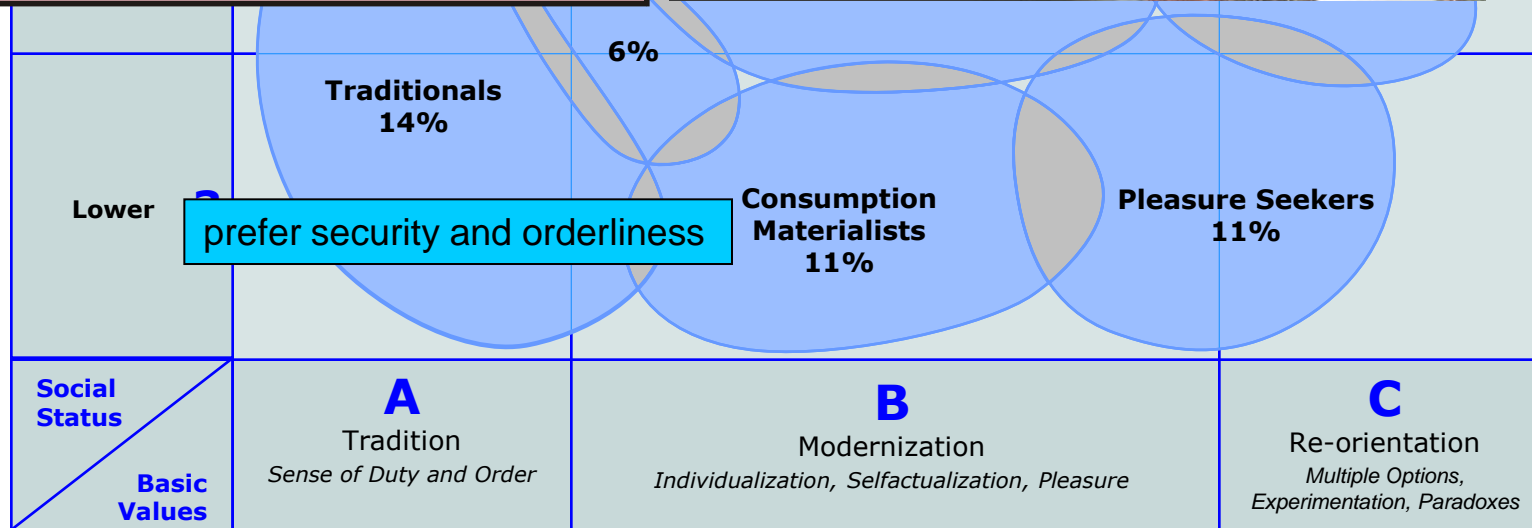


10 SINUS® Milieus – 4 Lifestyles

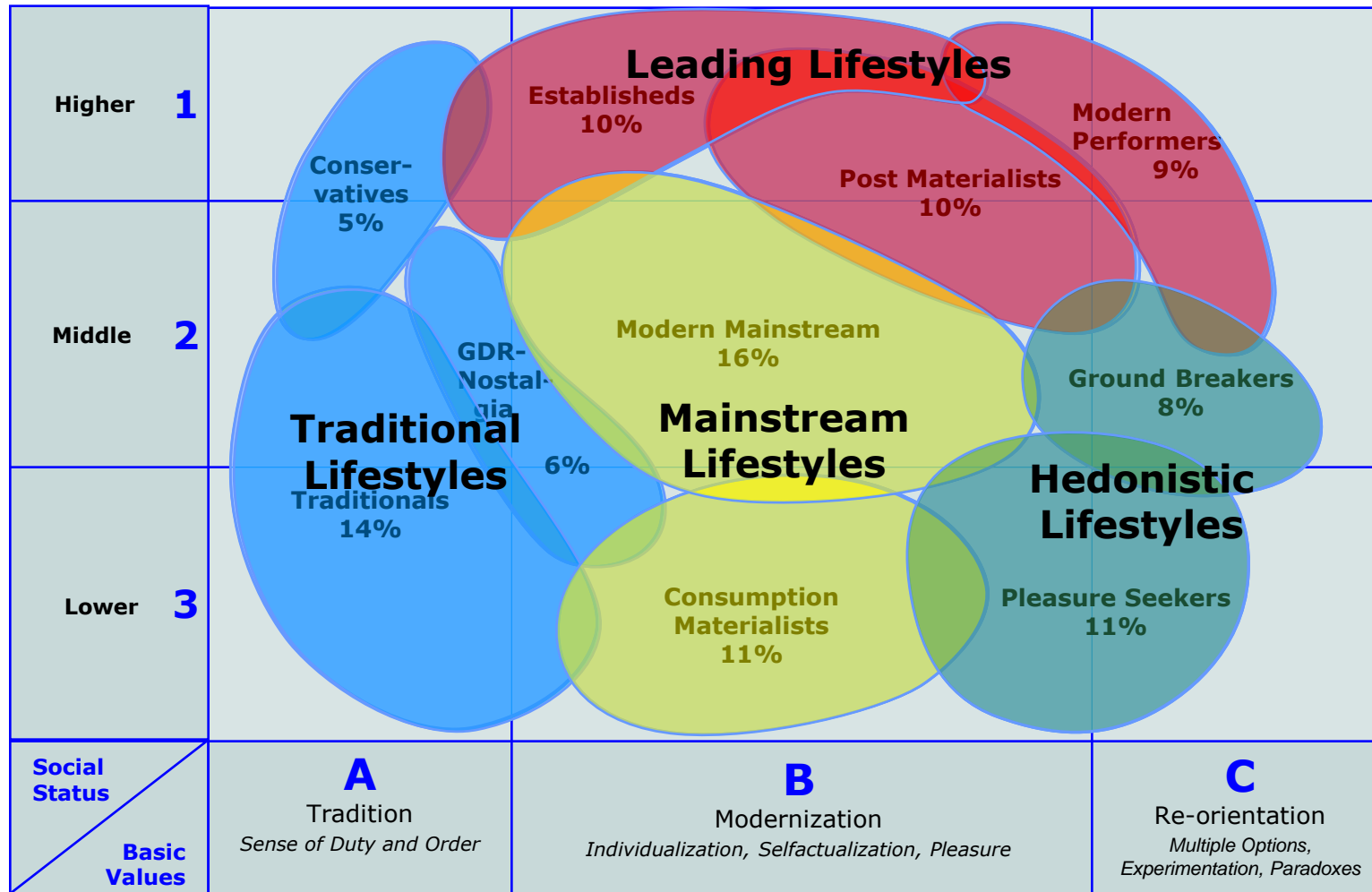
Traditionals

Profile:

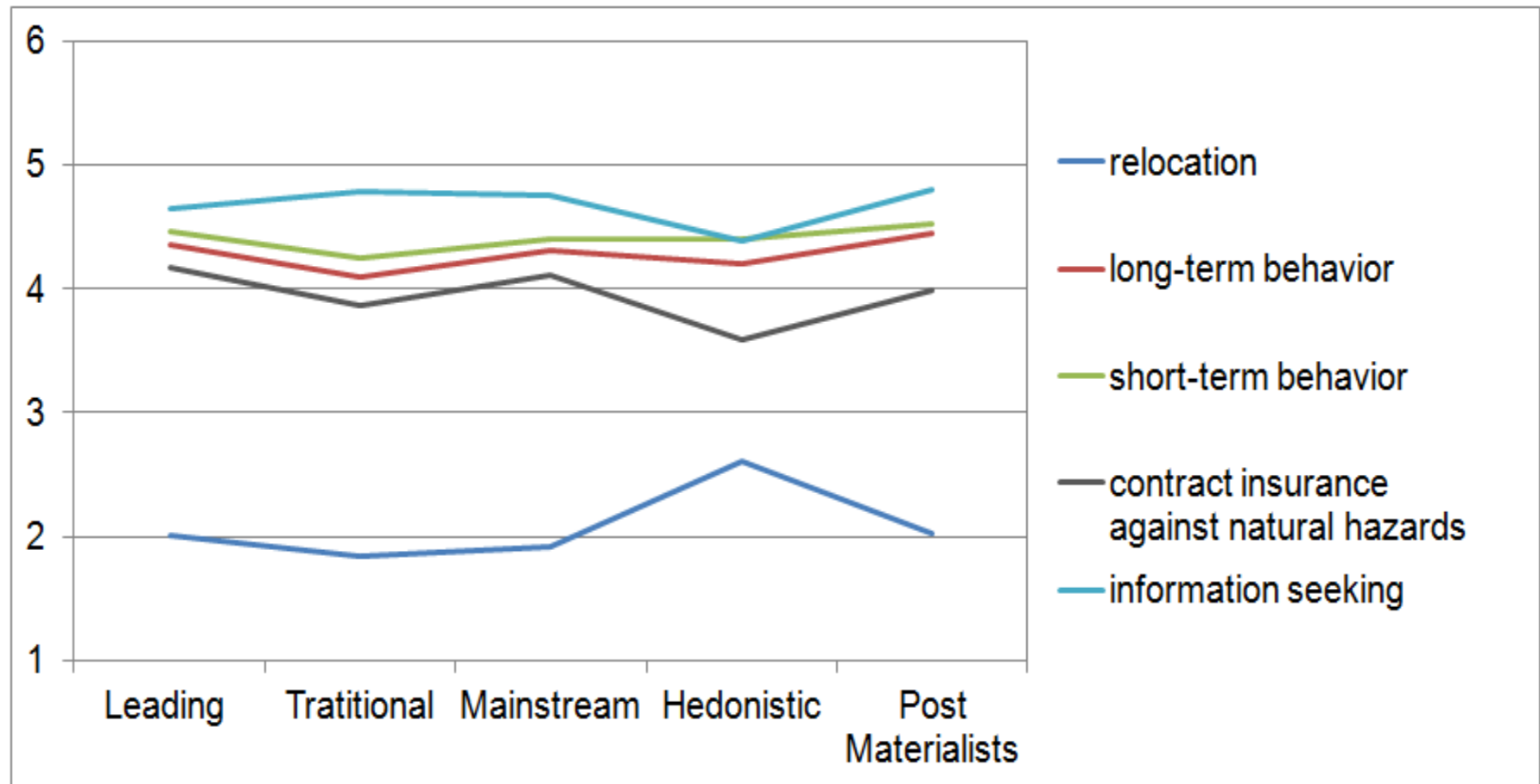
- age = older
- income = low
- value "modern" = low
- value "conservative" = high
- importance "price" = middle to high
- importance "environment" = low
- importance "peers" = middle to high



10 SINUS® Milieus – 4 Lifestyles



Comparison between lifestyles for specific climate adaptation behavior – 2nd survey



1="strongly disagree"; 2="disagree" 3="disagree more likely than not"; 4="agree more likely than not"; 5="agree"; 6="strongly agree"

Conclusion

- Psychological factors are important for adaptation behavior to climate change
- Perception of the impacts of climate change (in comparison to other parts of the globe) by the Northern Hesse population is weak
- there are tendencies towards differences in behavioral intention between lifestyles

Outlook

- implementation of empirical data into the agent based modeling
- data analysis (comparisons between the three surveys)
- qualitative analysis
- project end June 2013

Thank You!

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