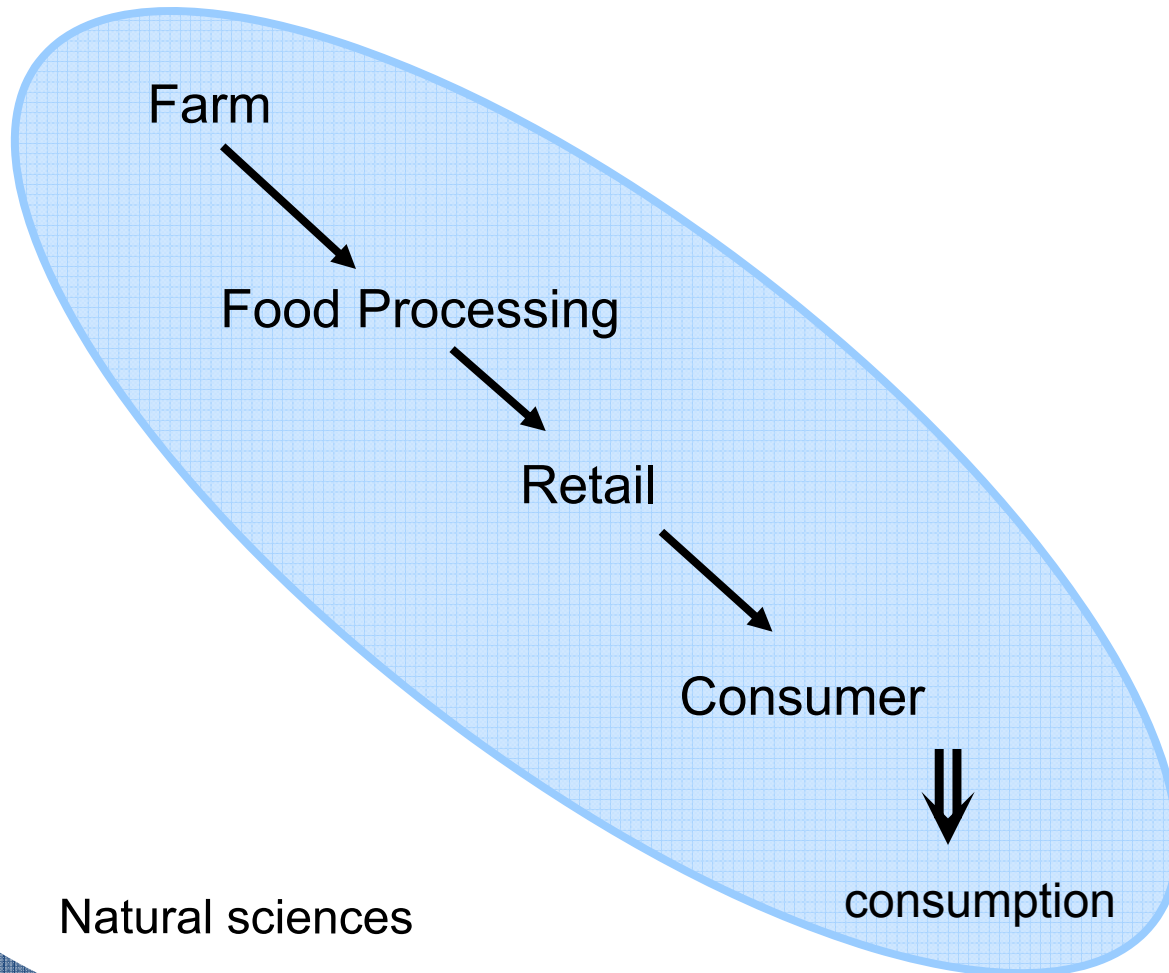


Linking behaviour to food safety risk

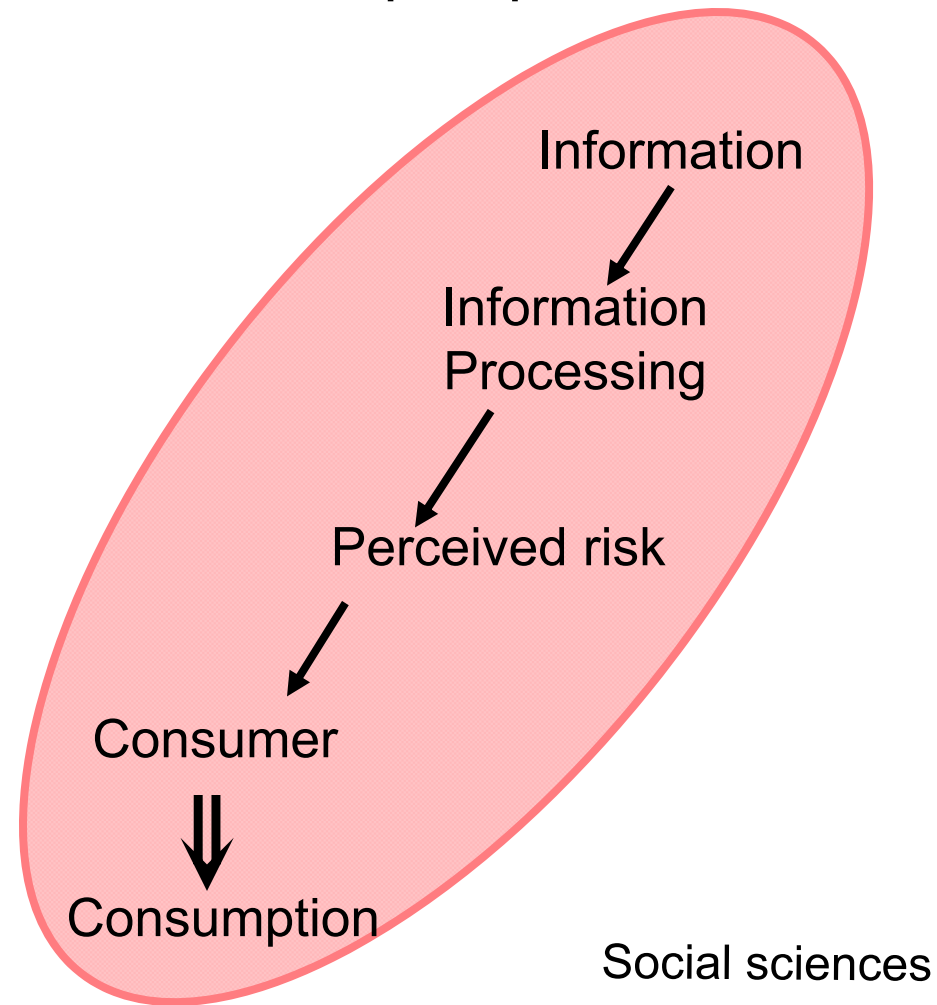
Professor Lynn J. Frewer
Food and Society Group



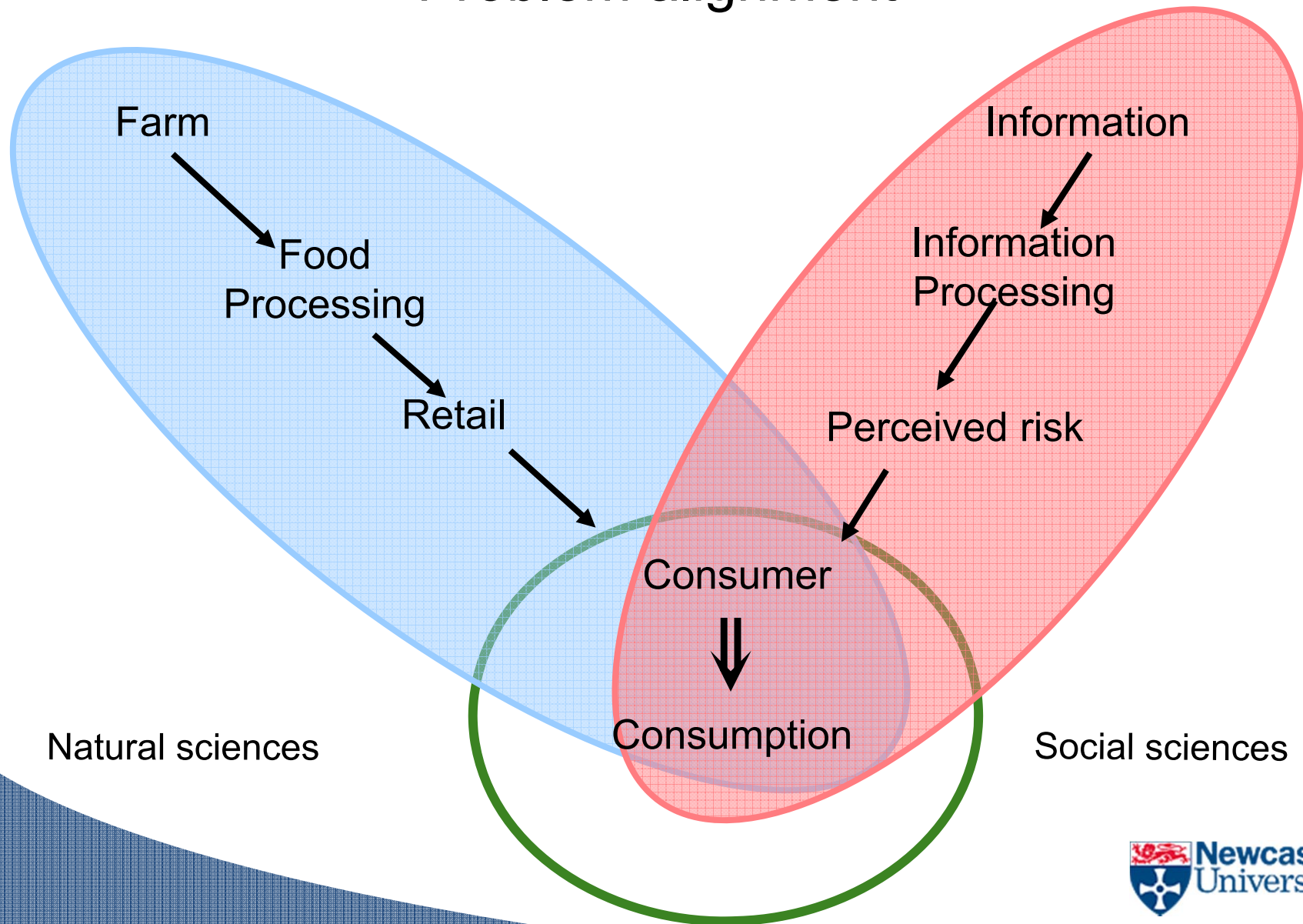
Problem from a natural science perspective



Problem from a social science perspective



Problem alignment



- How do people process food risk information?
- How does this change their behaviours? (If at all?)
- How can we improve food safety practices?

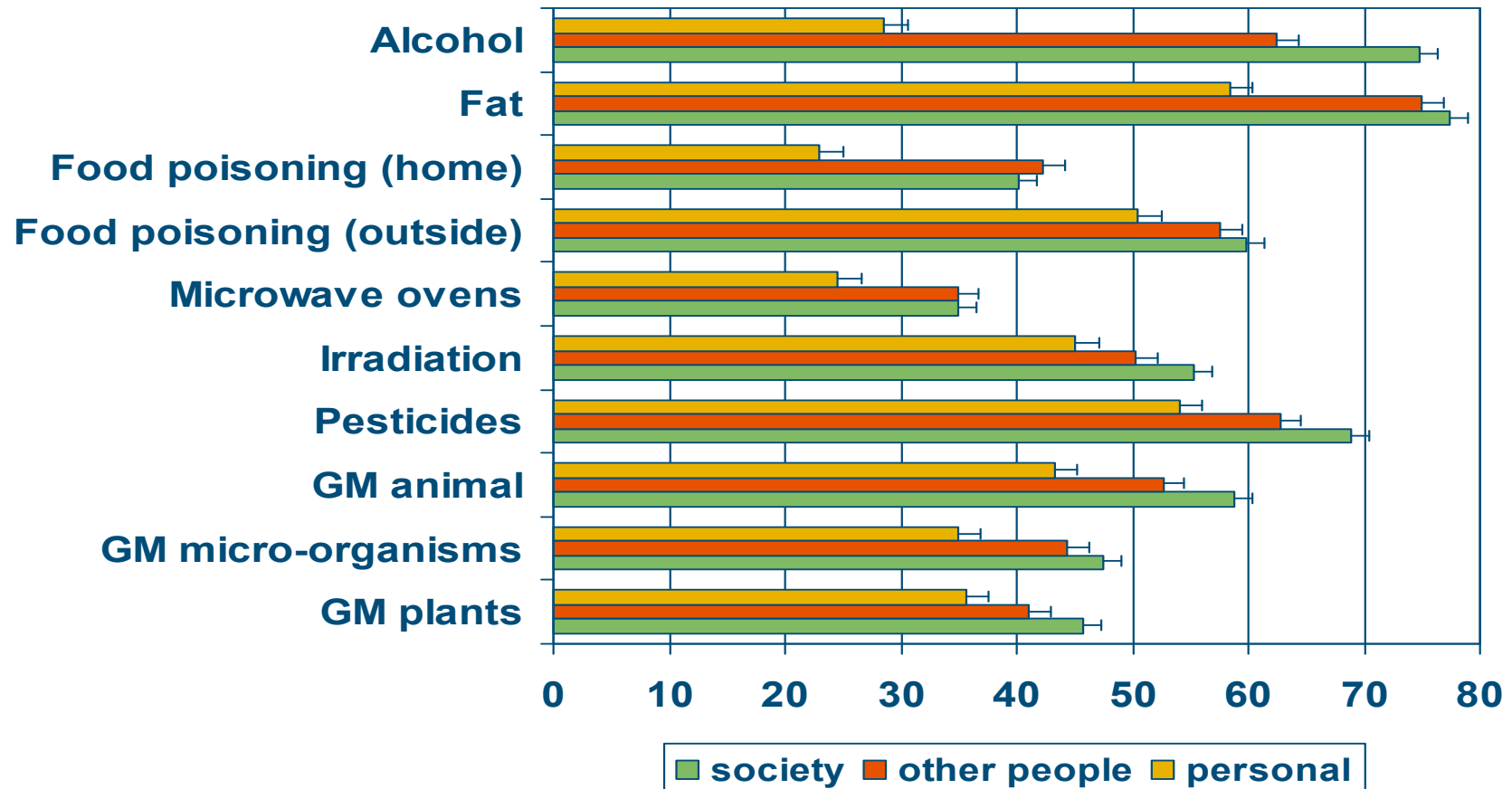


“Optimistic bias”

- Where people think they are, on average, at less risk than a comparative individual in their society
- As a consequence, they tend to engage in risky behaviours
- Does this apply to food safety?
 - YES!

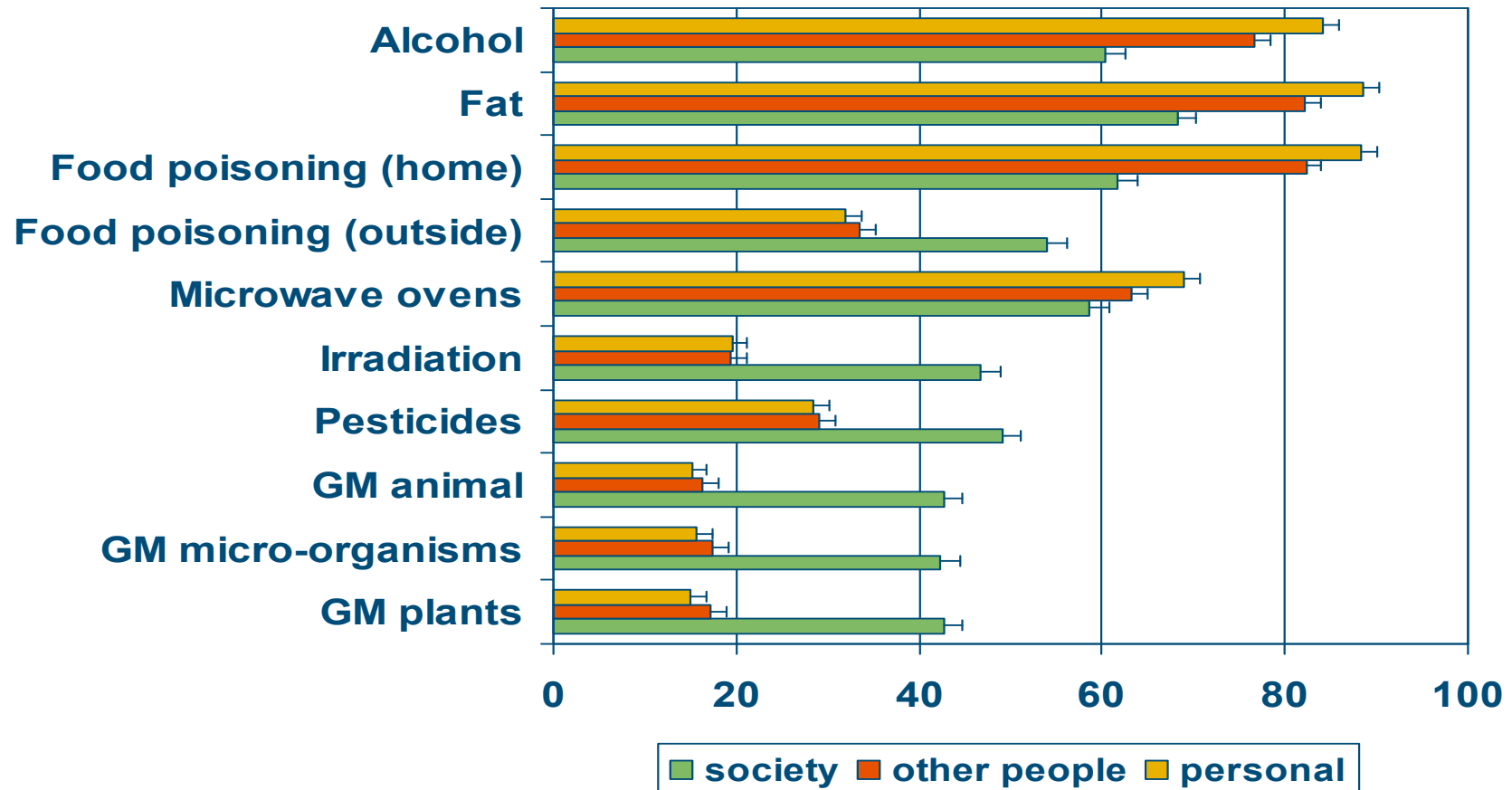
Miles, S., & Scaife, V. (2003). Optimistic bias and food. Nutrition Research Reviews, 16(01), 3-19.

Risk ratings

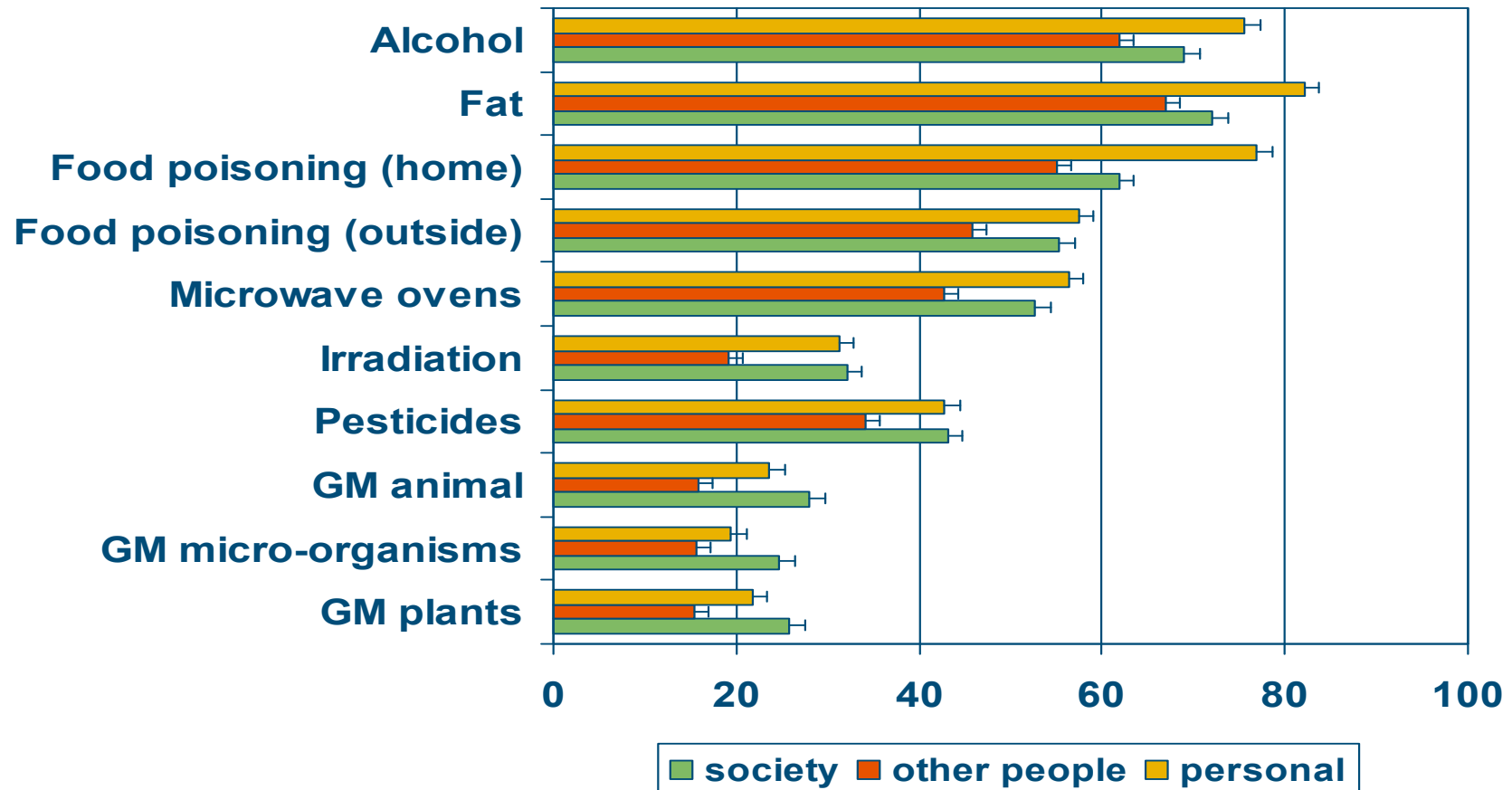


Frewer, L. J., Shepherd, R., & Sparks, P. (1994). The interrelationship between perceived knowledge, control and risk associated with a range of food-related hazards targeted at the individual, other people and society. *Journal of food safety*, 14(1), 19-40.

Control ratings



Knowledge ratings



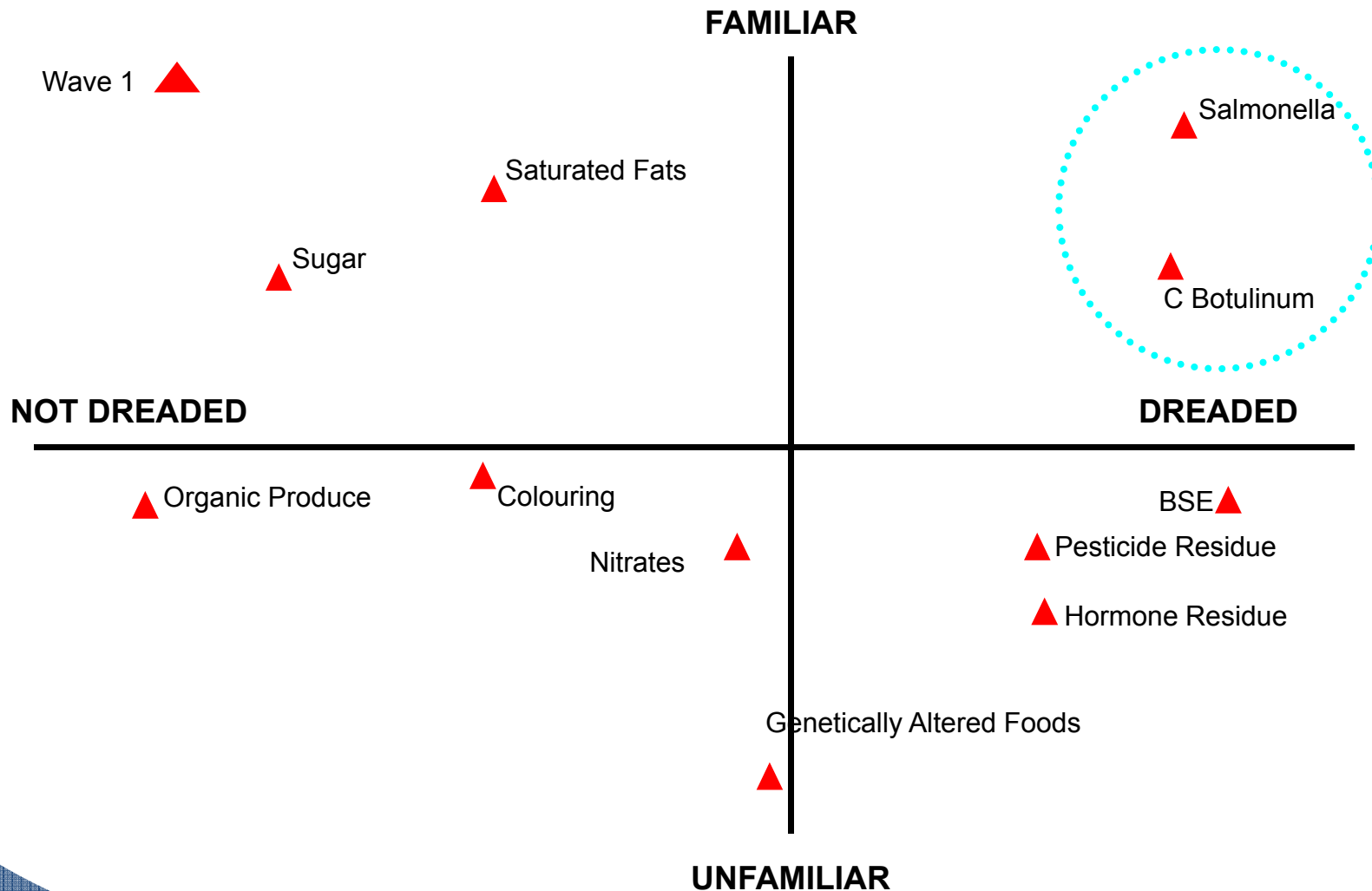
Frewer, Shepherd & Sparks (1994)

Risk communication

- If people think risk communication is directed towards
 - People who are at greater risk
 - People who have less control about the risk
 - People who are less knowledgeable.....

.....Why should they change their behaviours in line with the risk communication messages...?

Assessing perceptions of food risks



Fife-Schaw, C., & Rowe, G. (2000). Extending the application of the psychometric approach for assessing public perceptions of food risk: some methodological considerations. *Journal of Risk Research*, 3(2), 167-179.

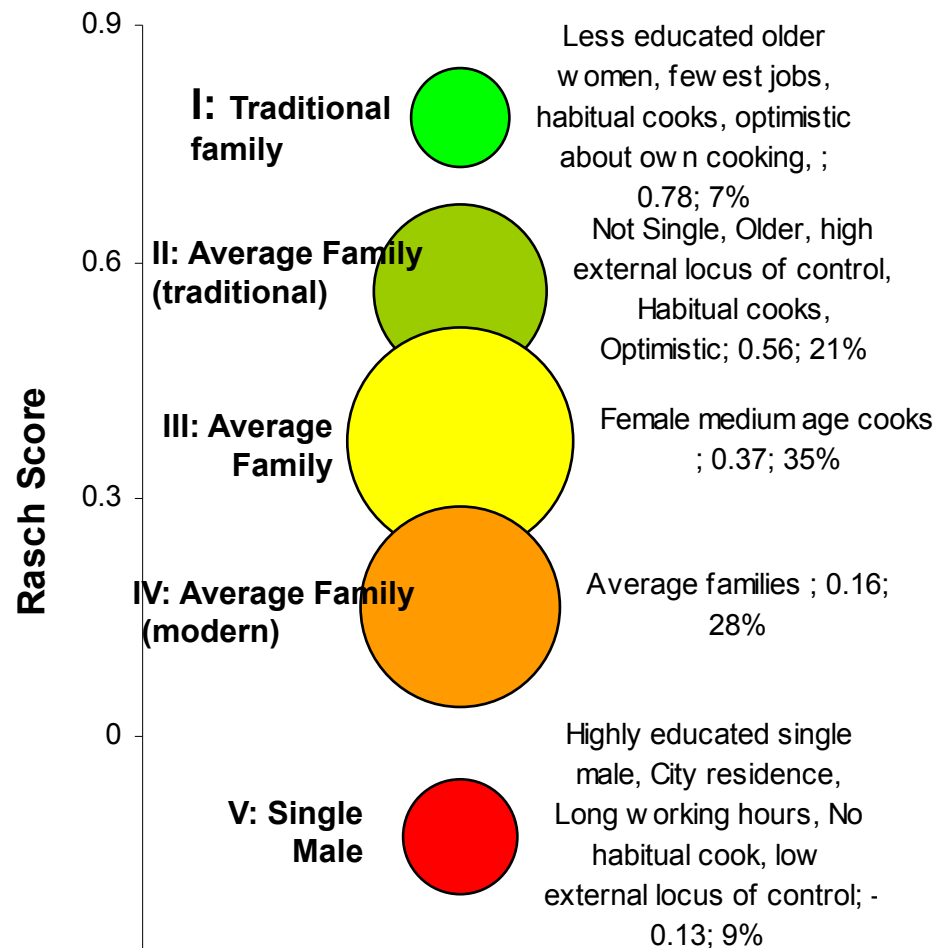
Risk Communication Issues

- **What** information should be communicated (What are people doing wrong)
- Are some people **more vulnerable** than others? (> Targeted communication)
- How to overcome **optimistic bias**? (It won't happen to me!)
- How to get people to process information in an **in depth way** which influences self-protective behaviours?

Explaining individual differences

What ***psychological factors*** determine consumer attitudes, decision-making and impact on self-protective behaviors?

Clusters of Consumers and self protective behaviour – domestic food safety



Results of hierarchical cluster analysis on Rasch data

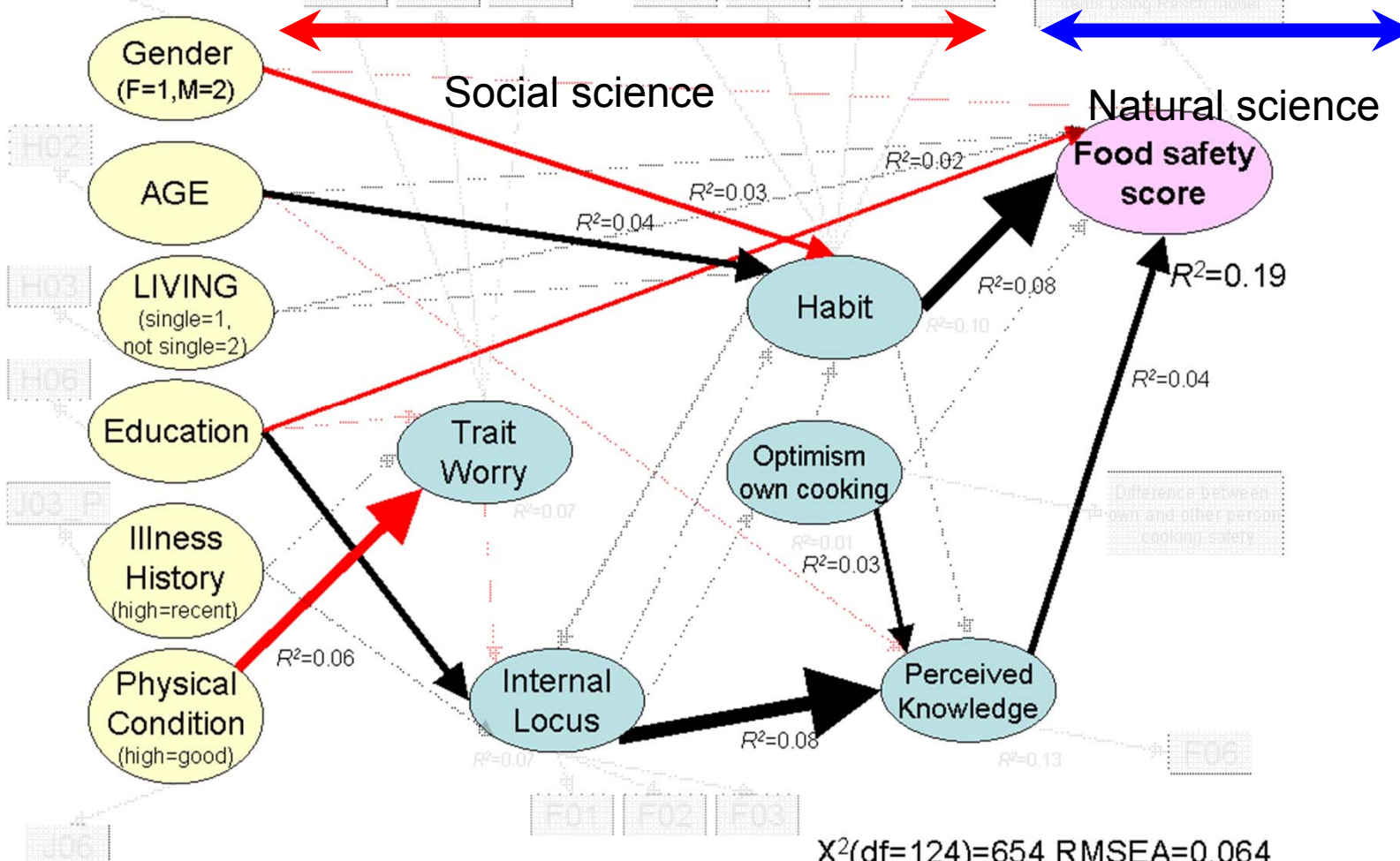
Fischer, A. R., Frewer, L. J., & Nauta, M. J. (2006). Toward Improving Food Safety in the Domestic Environment: A Multi-Item Rasch Scale for the Measurement of the Safety Efficacy of Domestic Food-Handling Practices. *Risk Analysis*, 26(5), 1323-1338.

Targeting individual information needs

Focus on achievable objectives regarding interventions for different population groups

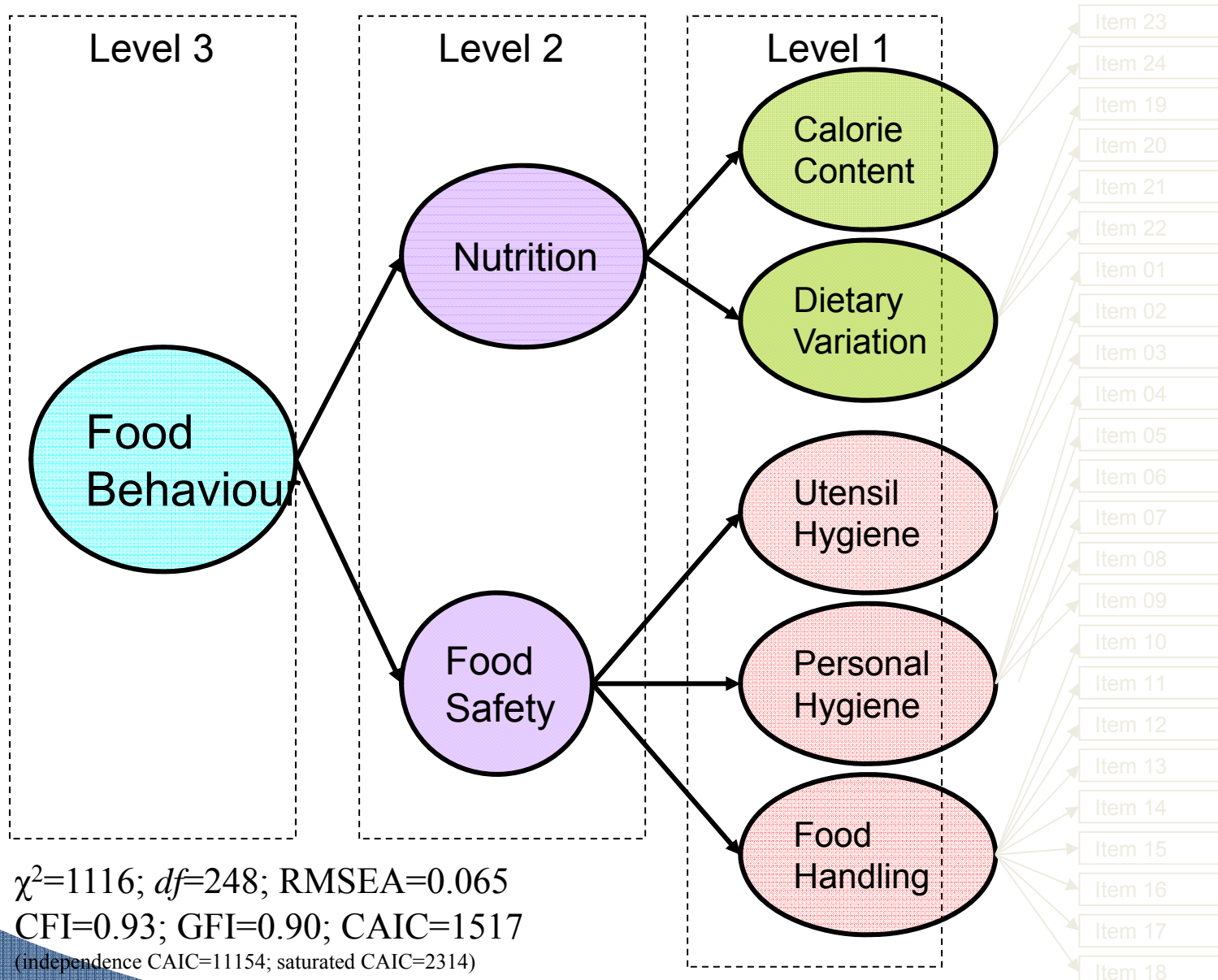
- Identify which consumer is "at risk", and give him/her information that (s)he needs
- Rasch scale provides information to determine which behaviour is within reach for which consumer
- Test against microbiological risks associated with specific food preparation behaviours

Determinants of consumer behaviour



Fischer, A. R., & Frewer, L. J. (2008). Food-Safety Practices in the Domestic Kitchen: Demographic, Personality, and Experiential Determinants1. *Journal of Applied Social Psychology*, 38(11), 2859-2884.

A hierarchical view - subjective representation of food safety

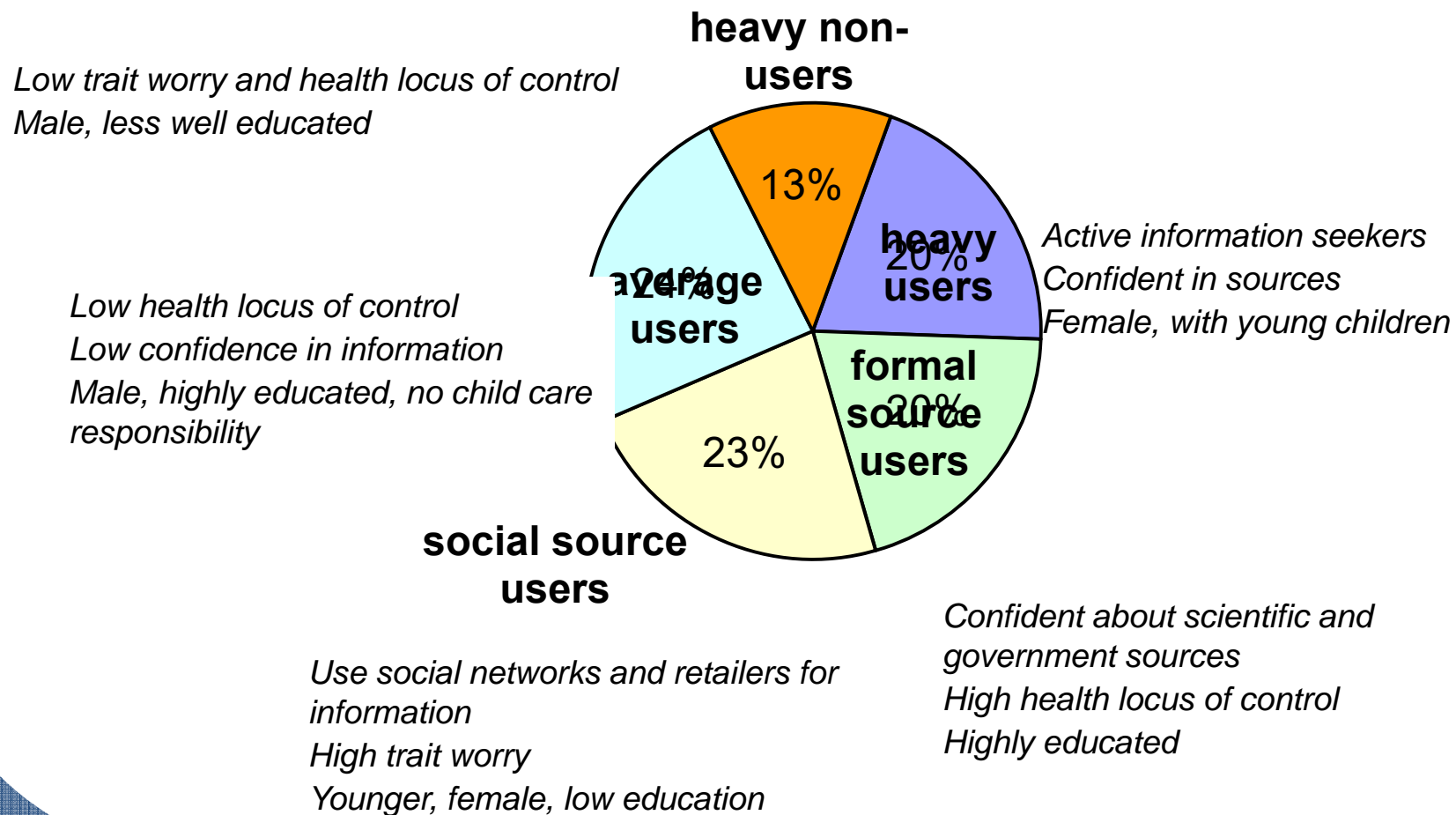


$\chi^2=1116$; $df=248$; RMSEA=0.065
CFI=0.93; GFI=0.90; CAIC=1517
(independence CAIC=11154; saturated CAIC=2314)

Determinants of food safety and good nutrition? Developing communication interventions....

- **Habitual behaviour**
 - People tend to do what they have always done, despite having other knowledge about how to protect themselves
- **Perceived Risk *versus* perceived benefit**
 - Peoples decisions involve “trading-off” their perceptions of risk associated with engaging in a behaviour versus their perceptions of benefit.
- **Role of affect or emotion**
 - Emotional cues may trigger knowledge and/or attitude activation which translates into behaviour
- **Implicit memory**
 - People may not explicitly recollect their knowledge?
 - Interactions between these....

Individual Differences in Seeking Food Safety Information



The role of attitude activation

Activating knowledge...

- Use *images* to evoke relevant emotion?
 - Disgust activates food safety knowledge
 - Anger does not activate food safety knowledge



Van Asselt, E., Fischer, A., De Jong, A. E., Nauta, M. J., & De Jonge, R. (2009). Cooking practices in the kitchen—Observed versus predicted behavior. *Risk analysis*, 29(4), 533-540.

Embed Food safety messages in recipes?

- Embed *Food Safety* messages in recipes?
- Reduce *optimistic bias* by equating information with target group?



So where are we...?

- We know a lot about barriers to behavioural change related to food safety...
- How do we overcome these?



Thank you!

Questions or comments?

*What NEW research is needed to make
consumers safe?*