



# Cultural differences in insect acceptance

**A comparison between students in Sweden and Thailand**



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# Background

- Dietary solutions to the tightly linked diet–environment–health trilemma
- Entomophagy, the consumption of insects, is promoted as an alternative sustainable source of protein for humans and animals

Tilman, D., & Clark, M. (2014)

Dobermann D, Swift J and Field LM. (2017).

- In many countries, including Thailand, the eating of insects is part of the cultural heritage
- In the western part of the world many have difficulties accepting insects as food



van Huis, A., Itterbeeck, J., Klunder, H. et al. (2013)

Looy, H., Dunkel, F. & Wood, J.R. (2014).

Tan, H.S.G., Fischer, A.R.H., Trijp, H.C.M. van & Stieger, M. (2016)

Image by Christoph Meinersmann from Pixabay

# The disgust factor

- Disgust - an emotion that evolved to avoid contact with disease-causing organisms
- Elicitors in the food domain not well understood



# Food Disgust Scale (FDS)

Validated, self-report, 8-item, composite measure of disposition to react with disgust to certain food-related stimuli

Promotes the understanding of:

- How food disgust shapes food behavior in a functional and dysfunctional way
- consumer acceptance of new foods and food technologies

Hartmann, C., & Siegrist, M. (2018)

# Research focus

The comparison between cultures where

- 1) insects are part of the cuisine
- 2) insects are not considered as food

Young, urban and educated, students can be considered trendsetters regarding eating habits and lifestyle behaviors

# The aim

To explore cultural differences between Swedish and Thai students with regard to their disposition to react with disgust to certain food-related stimuli. Further the study aimed at elucidating differences in familiarity and intention to include insects in the diet between these groups.

# Method

An electronically administered questionnaire to Swedish students ( $n=42$ ) and Thai students ( $n=39$ ) in September-October 2018.

The questionnaire was adapted from the studies by Verneau et al. (2016) and Hartmann & Siegrist (2018)



# Food Disgust Scale

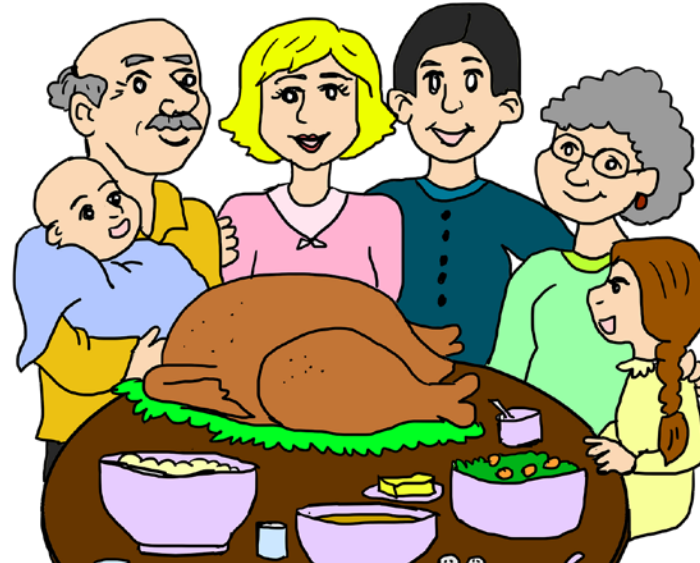
How disgusting do you perceive:

- To put animal cartilage into my mouth?
- To eat with dirty silverware in a restaurant?
- Food donated from a neighbor whom I barely know?
- To eat hard cheese from which mold was cut off?
- To eat apple slices that turned brown when exposed to air?
- The texture of some kinds of fish in the mouth
- To eat brown-colored avocado pulp?
- To eat a salad if there is a little snail in it



# Familiarity

Monitored via the question:  
“Have you ever heard of the  
eating of insects?”



# Intention to include insects in the diet

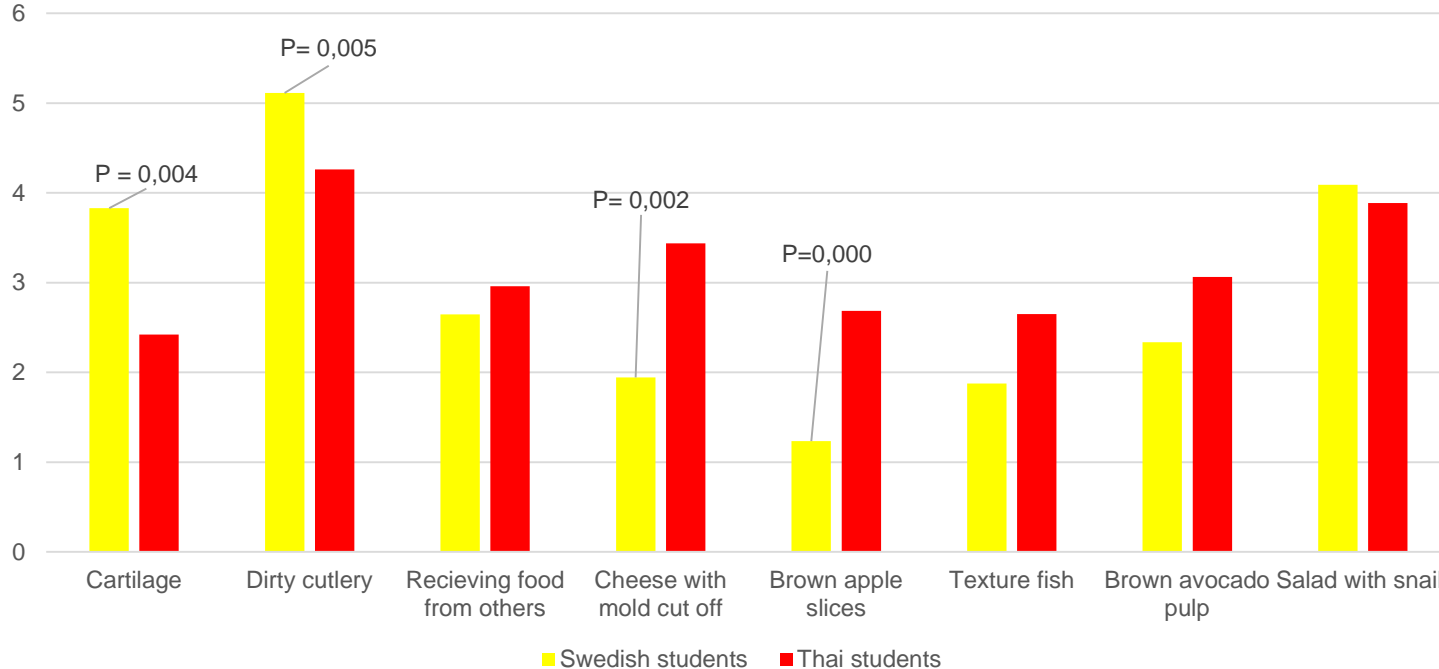
Monitored by the following questions:

- If you have heard about eating insects, is your intention then to introduce insects in your diet?
- If you have heard about eating insects, is your intention then to suggest to introduce insect proteins in friends and relatives diets?
- If you have heard about eating insects, is your intention then to buy products with insect proteins rather than traditional protein sources, if available on the market?

# Results

Indications of poor hygiene, like having to eat with dirty silverware in a restaurant, was found to be the most disgusting food-related stimuli among Swedish and Thai students alike.

# Food Disgust Scale



# Familiarity and intention

- In Sweden 98% of the respondents had heard of eating insects and the corresponding figure among Thai students was 89%.
- No significant difference between Swedish and Thai students in their intention to incorporate insects in the diet.
- One third of the respondents planned to incorporate insects in their future diets.

**Table 1.** No difference in the intention to buy products with insect protein rather than traditional protein sources among Swedish and Thai students, respectively.

	Country		
Intention to buy products with insect protein rather than traditional protein sources, if available on the market	Sweden	Thailand	Total
No	28	26	54
Yes	14	13	27
Total	42	39	81

# Conclusions

There were some cultural differences between Swedish and Thai students in regard to their disposition to react with disgust to certain food-related stimuli as measured by the Food Disgust Scale.



Almost all Swedish students were familiar with insects as food while a somewhat smaller share of the Thai students were familiar with entomophagy. The intention to include insects in the diet was however similar between the groups.

# Thank you for your attention!



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