A temperament test developed for the Norwegian horse breeds

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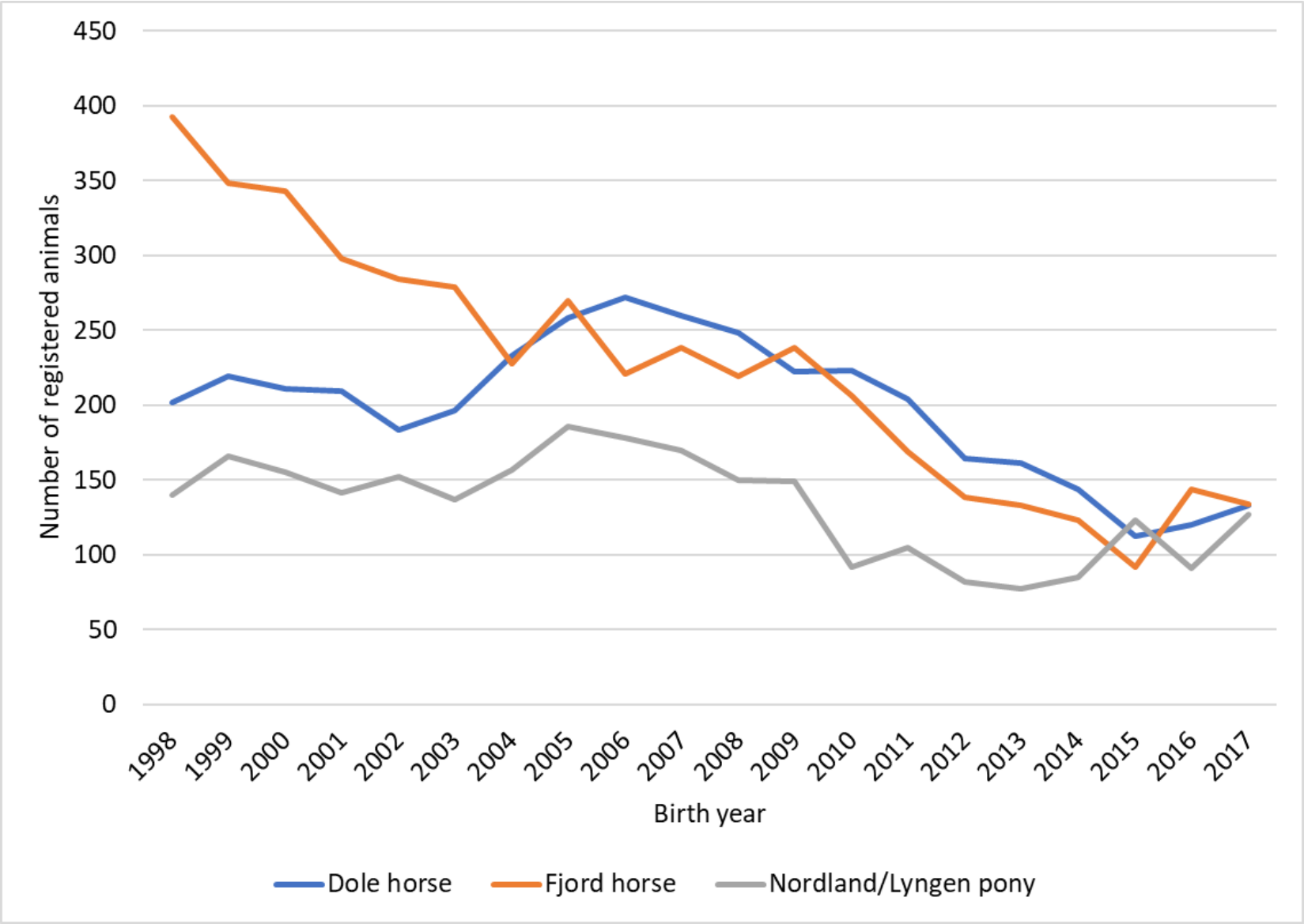
Norwegian horse breeds



Source: Norwegian Equine Centre

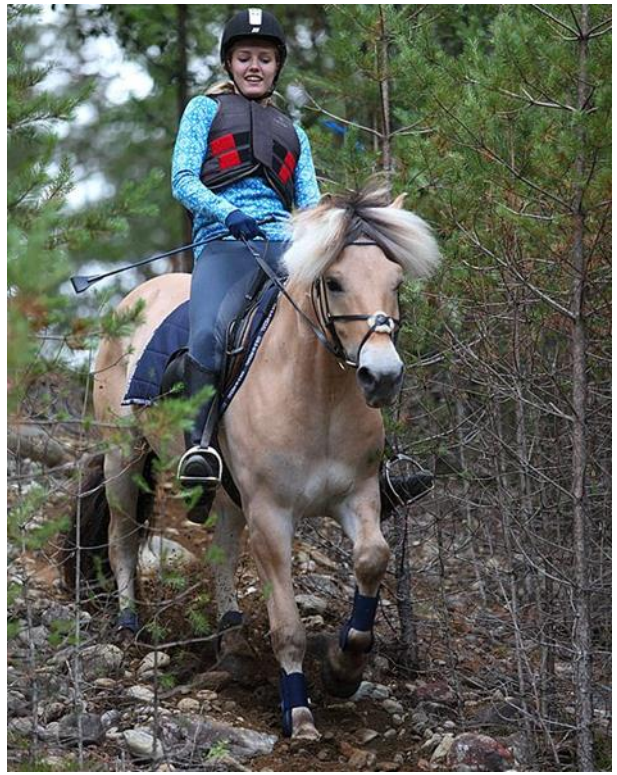
Background

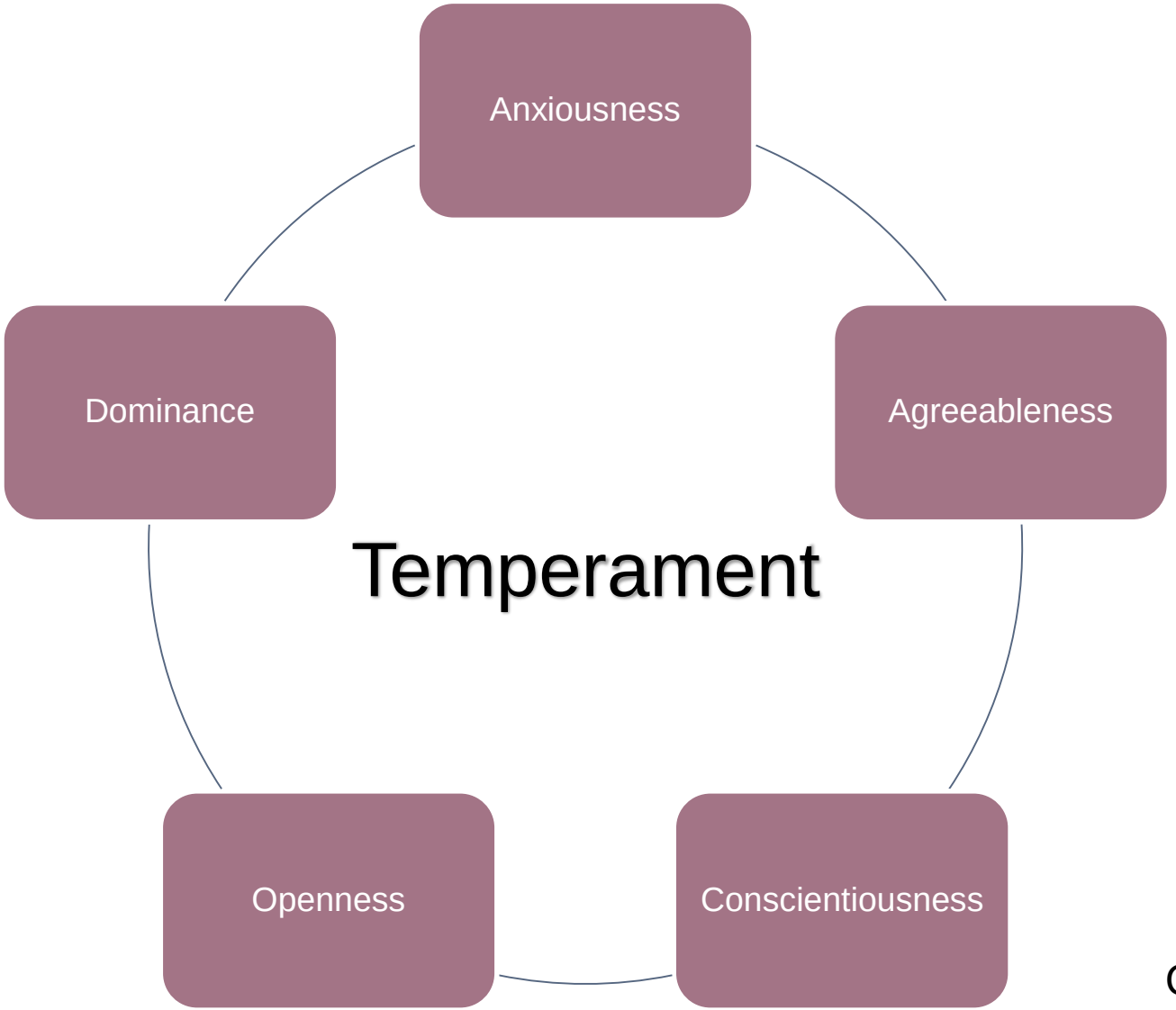
- **Small populations** with low number of born foals and high risk for loss of genetic variation
- **Strong competition** from imported horse breeds and overlapping market segments
- **Low demand**

How to increase **the competitive edge** for the National horse breeds?

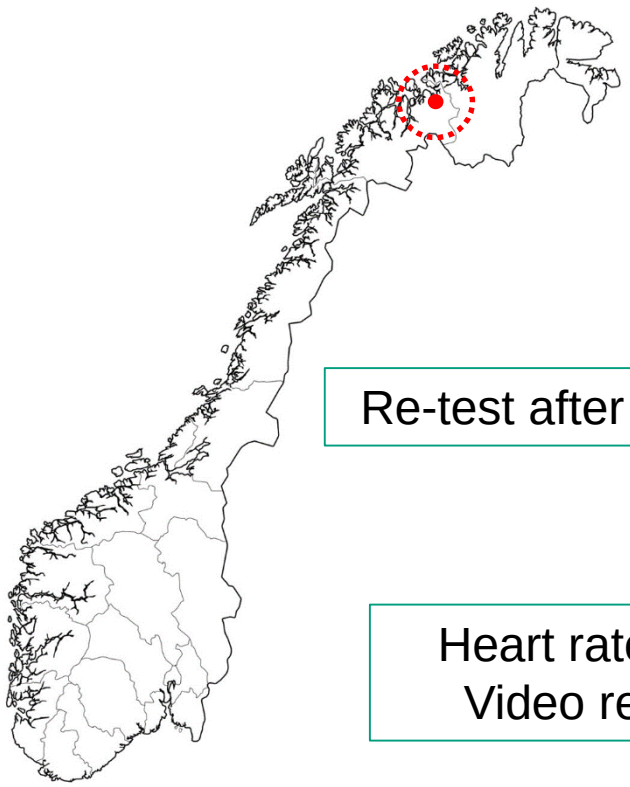
What are the strengths?

Physically and mentally robust





Olsen & Klemetsdal, 2017
Appl. Anim. Behav. Sci. 193, 60-66



The test

Nordland/Lyngen pony

63 horses
(57% males and 43% females)

Re-test after 1 month

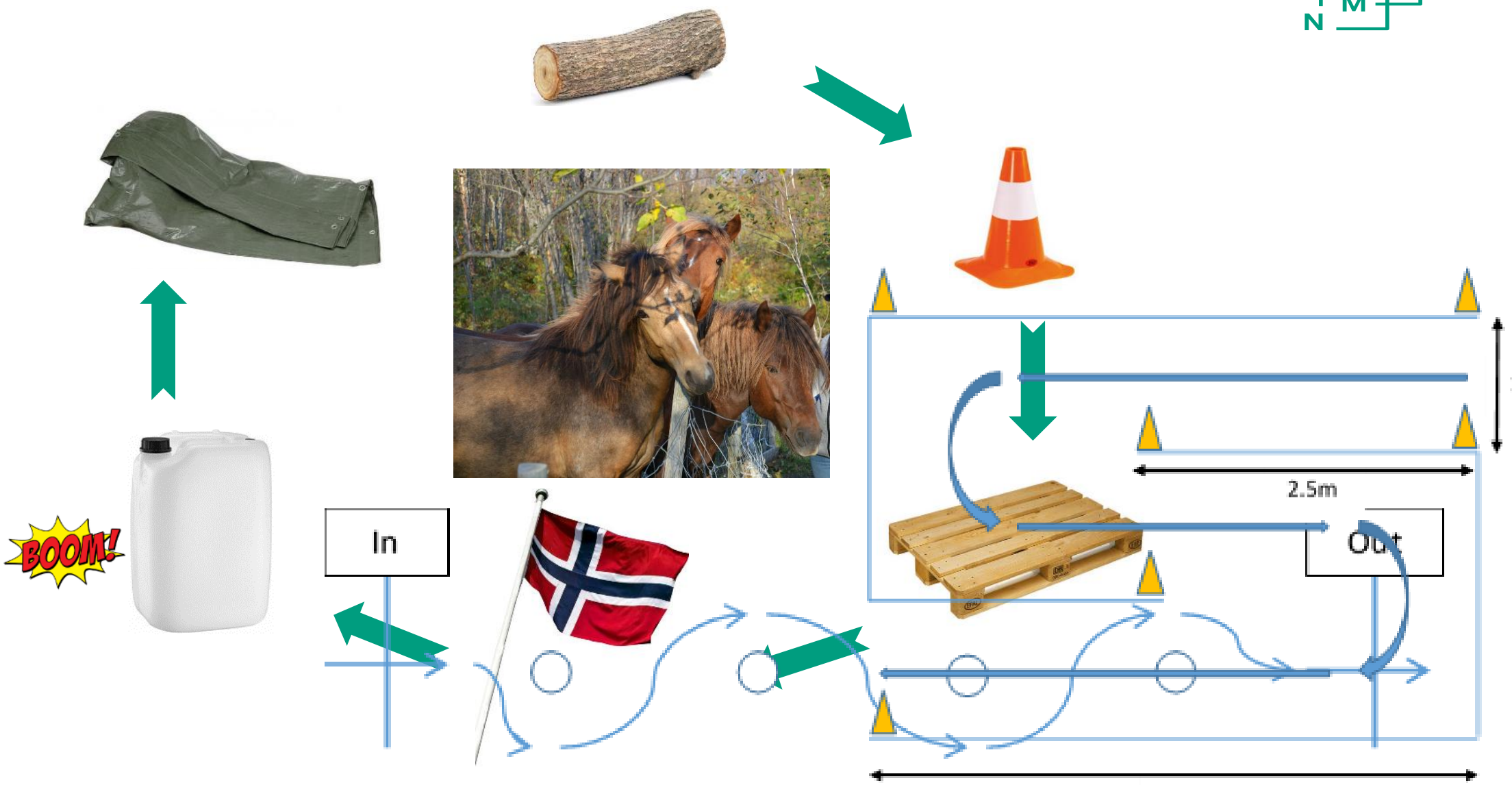
6 different farms

Heart rate monitor
Video recording

Average age: 8.2 years

Home environment,
but novel handler

A similar test course were build-up on each farm


BOOM!
In
Out
2.5m
4 m
2 m

Statistical analysis

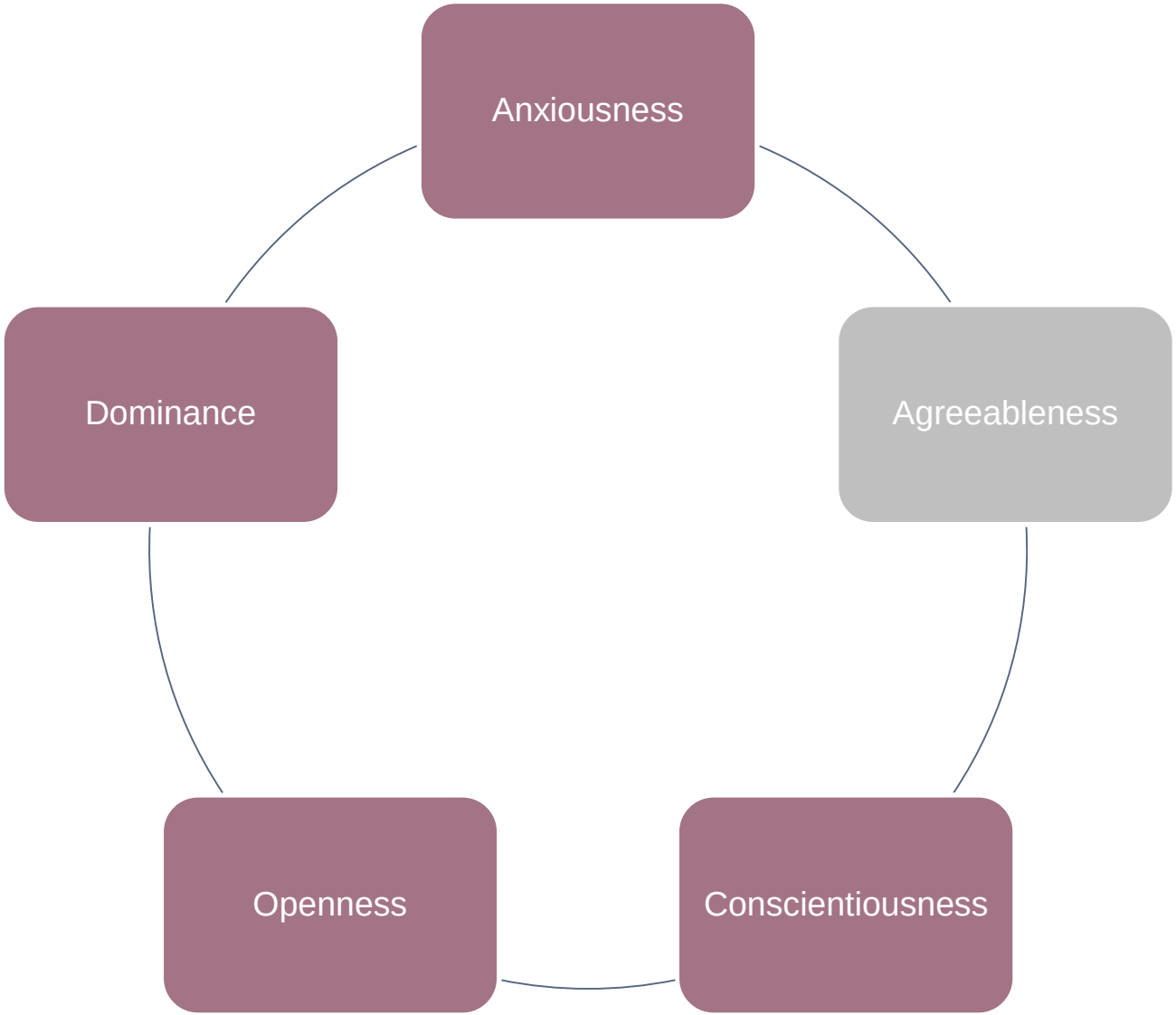
- Factor analysis
  - Re-calculation of the HPQ with augmented data
  - The individual test scores from the test moments
- Correlation analysis
  - Test scores vs. individual factor scores HPQ
  - Ind. factor scores HPQ vs. ind. factor scores test moments
- Regression analysis heart rate
- Spearman rank correlation
- Inter-rater reliability
  - Intraclass correlation

Main results / conclusions

- The test moments did not test separate traits
- Static and dynamic obstacles
  - Anxiousness and openness
  - Anxiousness: ‘flight behaviour’ and ‘time spent on task’ suitable traits (high rank correlation)
  - Conscientiousness: precision tasks
- High intraclass correlation for most traits, but some confusions in the scoring:
  - Flight behaviour and explorative behaviour
  - Dominance and conscientiousness

Question:

Could the test add information about the five dimensions of temperament found through the HPQ?


Anxiousness
Agreeableness
Conscientiousness
Openness
Dominance

Future tests

- …should cover both dynamic and static obstacles, and technical challenges
- …should vary the obstacles from an established library of events
- …should tune the description of traits to a higher precision to avoid confusion


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Photo: Kjetil Mjønerud