



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Dept of Animal Breeding and Genetics

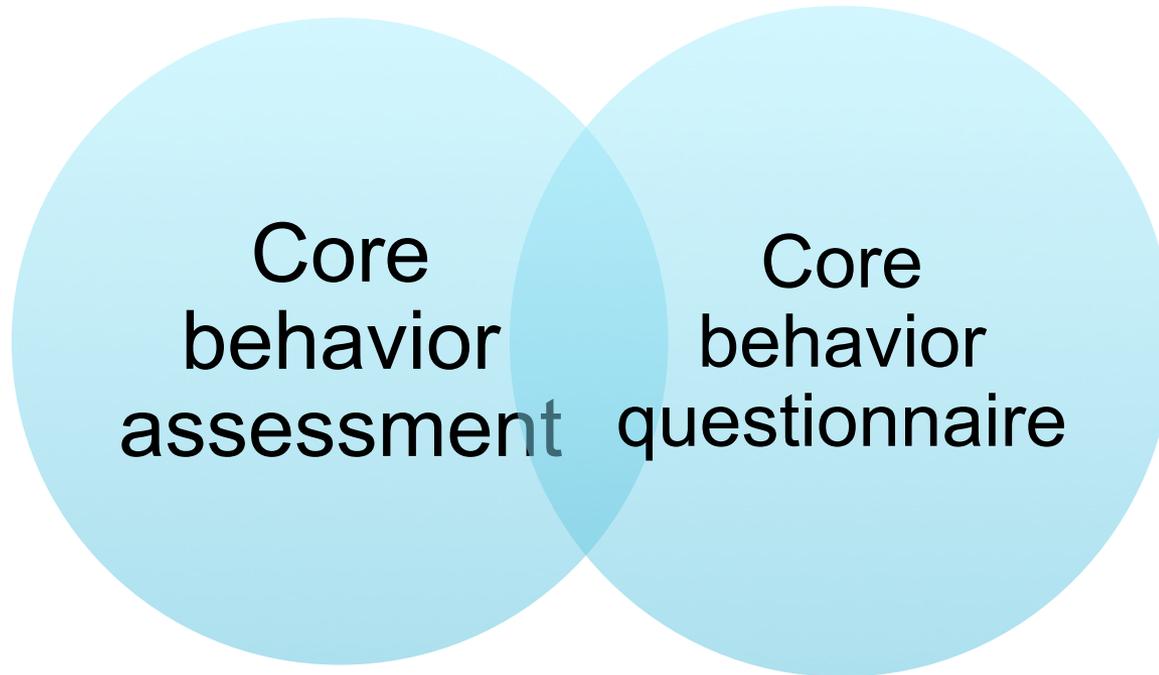
New developments and assessment tools for behavior Challenges and needs

Erling Strandberg

Breeding goal

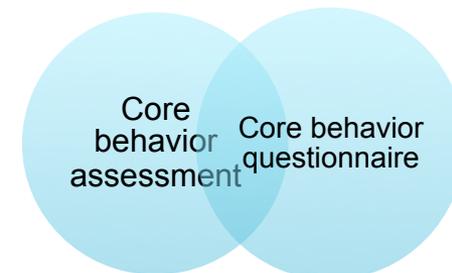
- Need to know what traits to improve: health, function, ...
- Behavior is **one** part of the breeding goal
- But what behavior?
- Different needs even within a breed:
 1. Show dogs
 2. Family dog for “lazy” people
 3. Family dog for active people
 4. Utility dog, working dog (“original use”)
- Risk of subdivision of already small breeds
- There is a need to **describe** the behavior
 - For the breed
 - For the individual
- Conclusion from previous workshop: 

Core behavior assessment and questionnaire

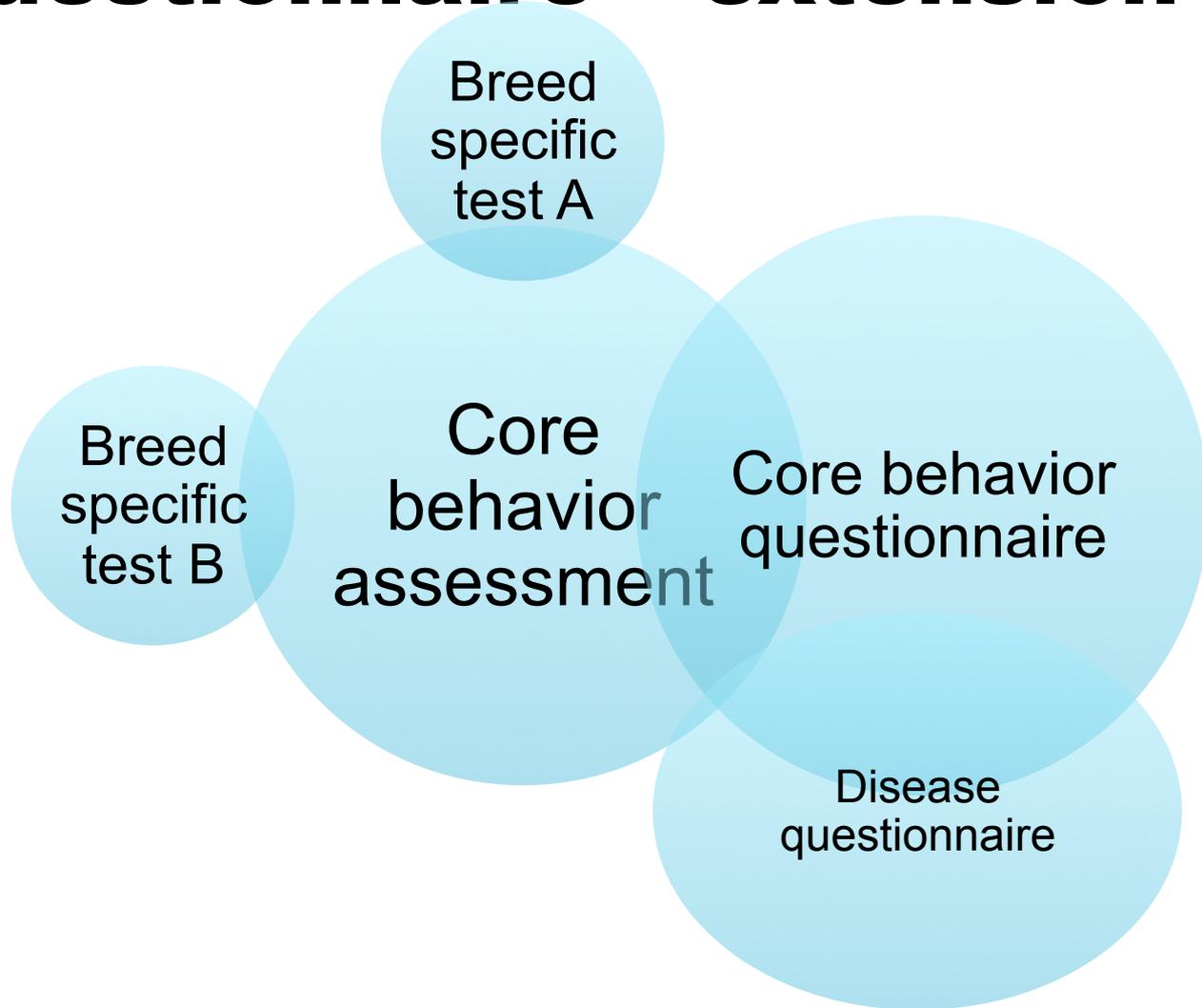


Assessment and questionnaire

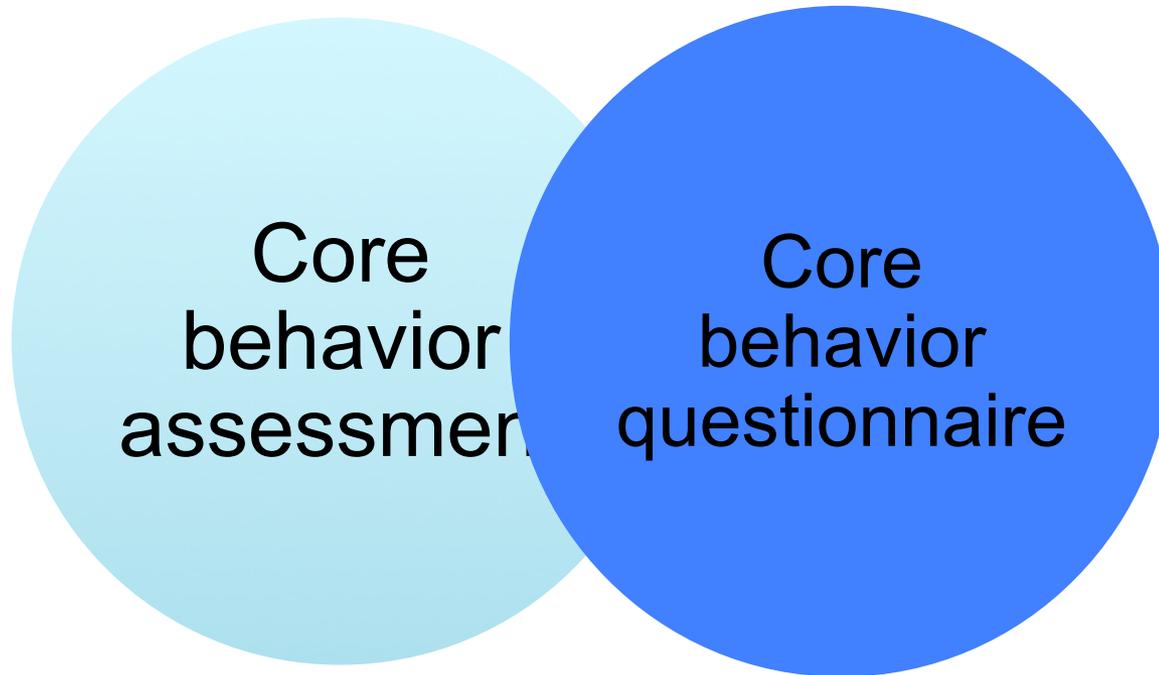
- Complement each other
- External evaluator valuable
- Some dogs may not show up at the assessment (e.g., extremely fearful)
- Could have a bad day at assessment, questionnaire more general behavior
- Dog-dog interaction is difficult to measure in assessment but can be addressed in questionnaire
- Breeders can influence the questionnaire



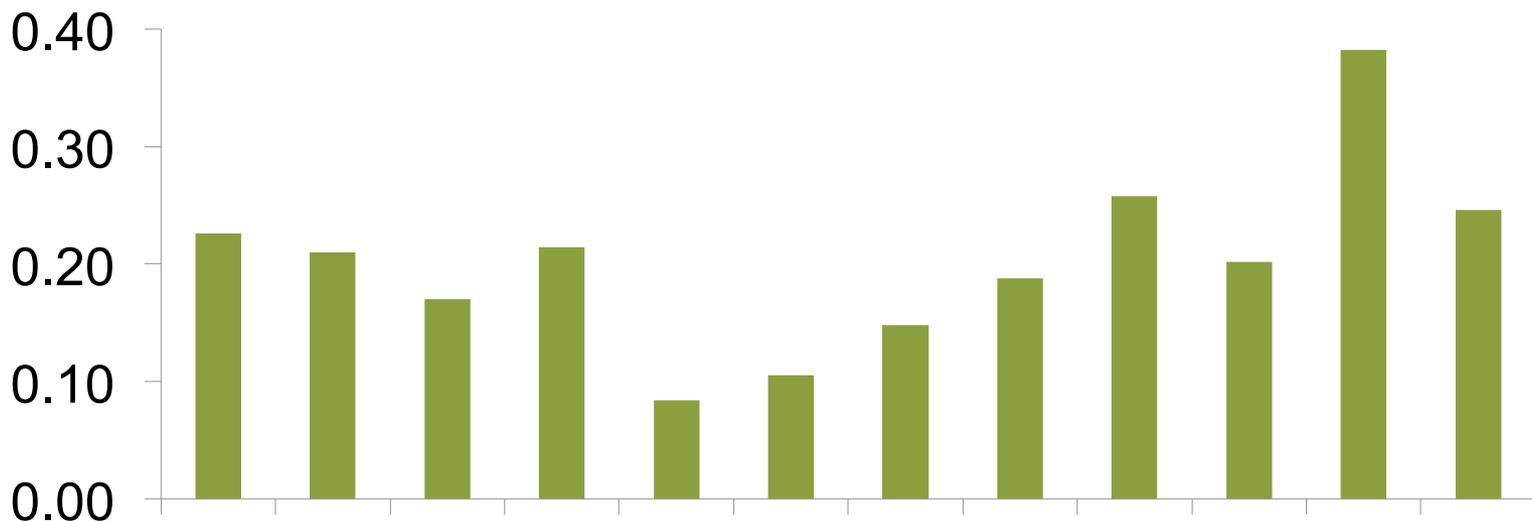
Core behavior assessment and questionnaire – extension



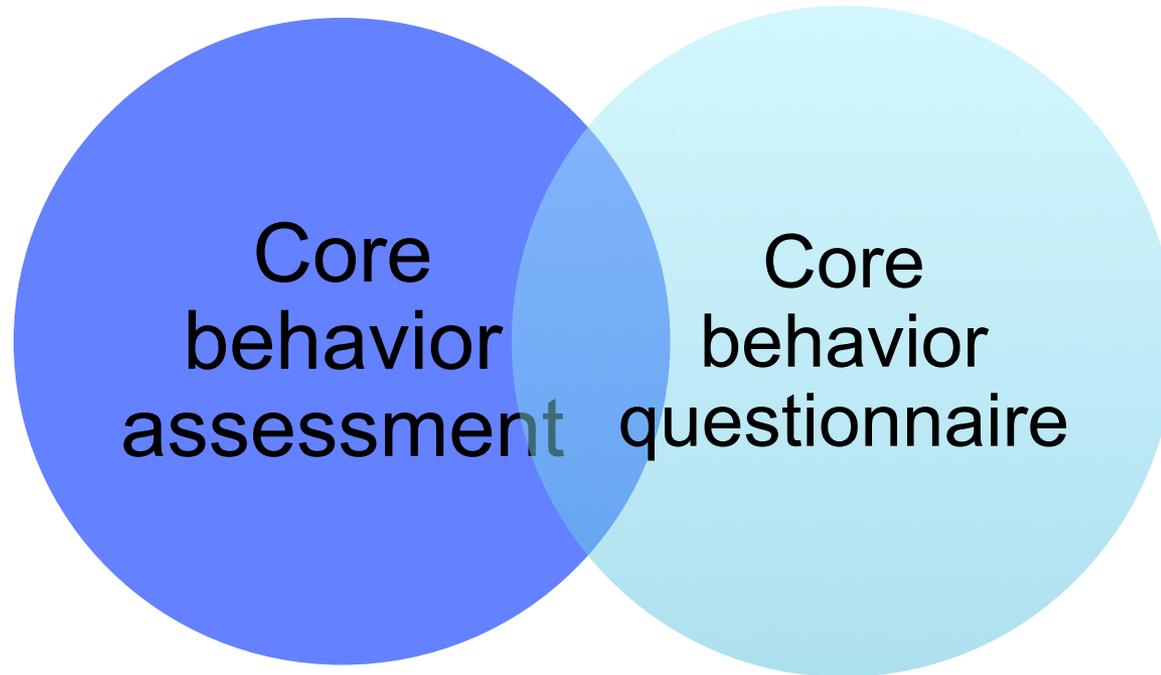
Core behavior assessment and questionnaire



Heritabilities C-BARQ (all breeds)



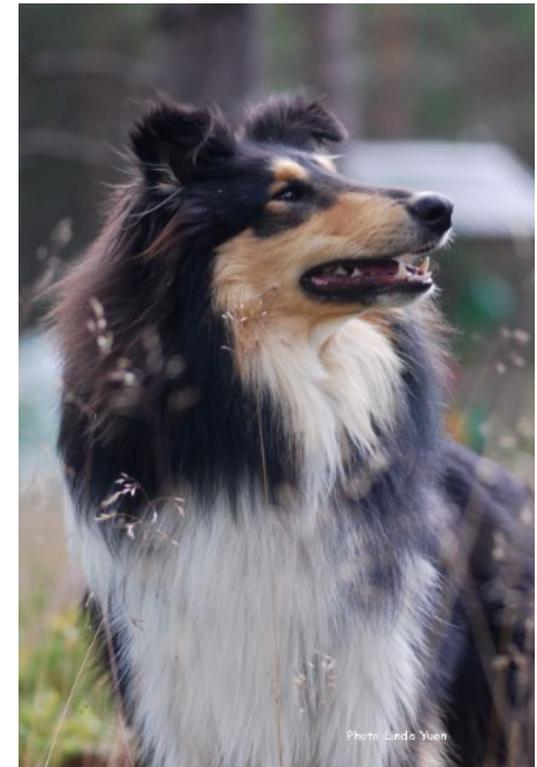
Dog-directed aggr/fear
Dog-directed aggr
Dog rivalry
Stranger-directed aggr
Owner-directed aggr
Dog-directed fear
Stranger-directed fear
Non-social fear
Dog-directed interest
Stranger-directed interest
Human-directed interest
Human-directed play
Trainability



Dog Mentality Assessment

mainly developed for working dogs

Trait	Heritability
Sociability	0.25
Curiosity/ Fearlessness	0.23
Playfulness	0.26
Chase	0.18
Aggression	0.15



Behavior and Personality Assessment in Dogs, BPH

- Description of behavior in standardized situations
- Developed to work for all breeds
 1. Stranger greeting
 2. Playing with object
 3. Food interest
 4. Surprise
 5. Sudden noise
 6. Approach stranger
 7. Surface material
 8. (Gun shot)



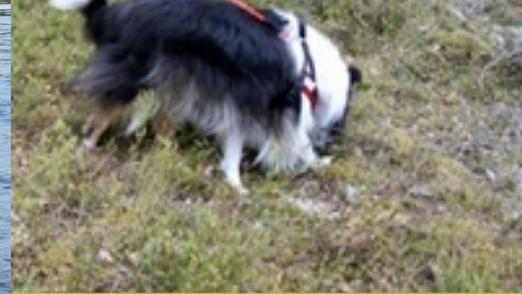
Heritabilities BPH traits

Trait	Toller	Ridgeback
Greeting	0.49	0.45
Curiosity/Security	0.38	0.66
Playfulness	0.03	0.30
Aggression/threat	0.34	0.39
Social insecurity	0.34	0.27
Happy and positive	0.37	0.47
Secure and curious	0.37	0.52

Is what we measure...



...what we want
to improve?



Genetic correlations between Dog Mentality Assessment and everyday behavior traits (C-BARQ, collie)

Trait	Genetic correlation
Sociability	0.87
Fear	0.70
Playfulness	0.63
Chase	0.73
Aggression	0.28

Food for thought

- What traits should we improve, everyday behavior?
- What traits can we select on?
- Are they correlated to goal traits?

- What about imported dogs? International genetic evaluations?
- Genomic information easier than traditional quantitative genetics?

- How will we convince breeders to actually select for better behavior?