






PERSONALITY AND PERFORMANCES OF SEARCH DOG-HUMAN DYADS : TO MATCH OR NOT TO MATCH?


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GENERAL CONTEXT



- Companion dogs share more and more closely our environnement
- Various utility for dogs
 - Working dogs for narcotics detection
 - Guide dogs
 - Search dogs
 - Companion dogs
 - ...
- Important number of working dog
 - 22 000 persons with assistance dogs



Irvin, 2014

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GENERAL CONTEXT



- Selection of working dog
 - Objective : Obtain the highest performances
 - Selection
 - Morphology
 - Physiology
 - Behaviour → Personality traits
- Recent research on dogs' performances
 - Good obedience performance
 - ⇔ Good dyads relationship
 - ⇔ Time spent with the dog
 - ⇔ Bolder dogs
 - ⇔ Owner lower on neuroticism

Lefebvre et al., 2007

Svartberg, 2002

Kortschal et al., 2009

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SCIENTIFIC CONTEXT



- Byrne's law of similarity
 - Similarity of personality traits may predict the attraction between two individuals
- For pets ?
 - Dog and owner resemble each other in terms of personality
 - Matching the personality of dogs and owners may predict owner satisfaction
- For working dogs ?

Byrne, 1961

Turscan et al., 2012

Curb et al., 2013

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OBJECTIVE

- Is there a link between



- Human and dog personality trait
- Human-dog personality matching

AND

- Dyad's performance
- Quality of the human-dog relationship

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METHODS

1- SUBJECTS AND GENERAL PROCEDURE

- 14 human- search dog dyads
 - 12 men and 2 women
 - 11 Malinois and 3 Tervuren
- 4 data set for each dyad
 - Test of performance
 - Handler personality questionnaire
 - Dog personality test
 - Relationship questionnaire



- Data collected from January to April 2013

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METHODS

2- PERFORMANCE TRIALS

- Search task performance
 - Dyads' ability to search and find a hidden person
 - 4 tests per day over a 3-day-period



- 3 variables for performances
 - Time spent searching
 - Number of errors
 - Improvement between day 1 and day 3

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METHODS

2- HANDLER PERSONALITY

- Standard human personality test : NEO-PI-R
 - Five factor inventory / Questionnaire
 - **Neuroticism**
 - Anxiety, hostility, depression, self-consciousness, impulsiveness, vulnerability to stress
 - **Extraversion**
 - Warmth, gregariousness, assertiveness, activity, excitement seeking, positive emotions
 - **Openness to experience**
 - Fantasy, aesthetics, feeling, actions, ideas, values
 - **Agreeableness**
 - Trust, straightforwardness, altruism, compliance, modesty, tendermindedness
 - **Conscientiousness**
 - Competence, order, dutifulness, achievement striving, self-discipline, deliberation

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METHODS

3- DOG PERSONALITY

- Dog personality through 5 sub-tests
 - Test : novel environment, novel person, novel object and familiar toy, problem solving
 - Principal component analysis
 - 5 behavioral traits
 - Conscientiousness / Training Focus
 - Neuroticism
 - Activity/exploration
 - Introversion
 - Human familiarity



Credit photo : ENVA

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METHODS

4- RELATIONSHIP QUALITY

- Human-dog relationship assessed through questionnaire
 - Time/activity spent together
 - Interactions: time, method's of education (positive, aversive)
 - ...



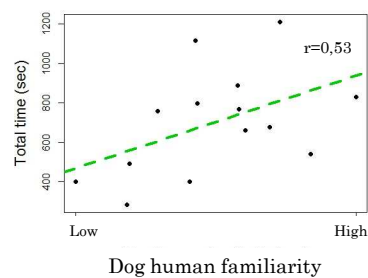
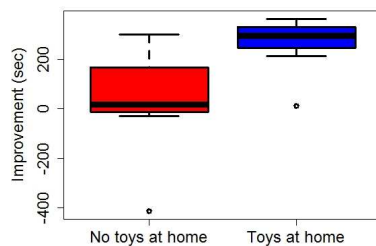
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RESULTS

1-PERFORMANCE



- Lower dyads' performances correlated with
 - The handler physically punishing the dog
 - No toys at home
 - The dog personality trait « *human familiarity* »
 - The handler personality trait « *excitement seeking* »



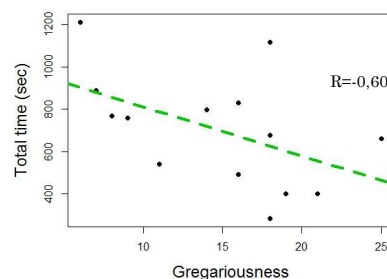
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RESULTS

1-PERFORMANCE



- Higher dyads performances positively correlated with
 - The handler personality trait
 - « *Gregariousness* »
 - « *Activity* »
 - « *Achievement striving* »
 - « *Dutifulness* »
 - « *Modesty* »



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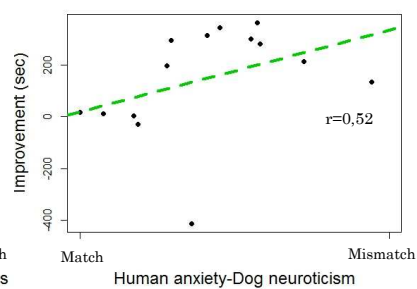
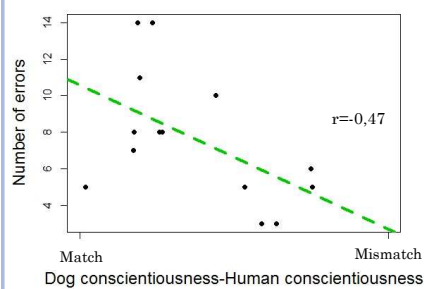
RESULTS

1-PERFORMANCE



○ Lower dyads performances correlated with

- Matching of
 - Human « *conscientiousness* » with dog « *conscientiousness* »
 - Human « *anxiety* » with dog « *neuroticism* »



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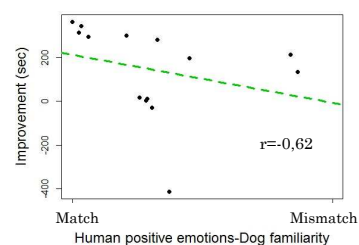
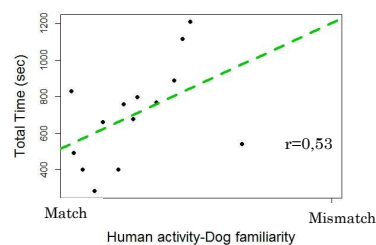
RESULTS

1-PERFORMANCE



○ Higher dyads' performances correlated with

- Matching of
 - Human « *activity* » with dog « *human familiarity* »
 - Human « *positive emotions* » with dog « *human familiarity* »



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RESULTS

2-DYADS' RELATIONSHIP



- A better dyads' relationship quality correlated with
 - The dog personality trait « *Conscientiousness* »
 - The handler personality trait
 - « *Positive emotions* »
 - « *Openness to experience* »
 - « *Ideas* »
 - Matching of
 - Human « *competence* » with dog « *conscientiousness* »
 - Human « *conscientiousness* » with dog « *conscientiousness* »
 - Human « *order* » with dog « *conscientiousness* »

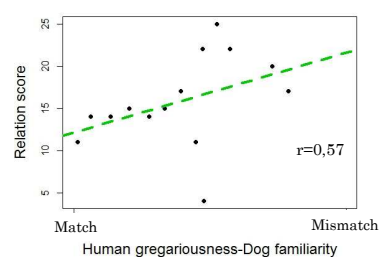
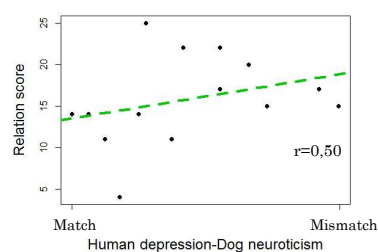
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RESULTS

2-DYADS' RELATIONSHIP



- A lower dyads' relationship quality correlated with
 - Matching of
 - Human « *depression* » with dog « *neuroticism* »
 - Human « *gregariousness* » with dog « *human familiarity* »



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DISCUSSION



- Better performances seems to be improved with
 - Good human-dog relationship
 - Some handler personality traits
 - Some dog personality traits
 - Match/mismatch of some human-dog personality traits
- Results show a complexity of factors linking human and dog personality, human-dog relationship and performances

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DISCUSSION



- Future studies
 - Other performance tasks
 - Other dyads (guide dog, police dog, ...)
 - Relation between performance and relationship

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THANKS FOR YOUR ATTENTION



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THANKS TO

The Paris fire brigade



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