Current and future studies of the dog-human relationship

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Background
Why share our homes with dogs?

**Biophilia Theory**
‘the urge to affiliate with other forms of life’

(Wilson, 1984; Kellert & Wilson, 1993)

**Naturalistic Theory**
”cooperation between evolving species increases evolutionary success for both of them’

(Paxton, 2000)
What is a ’relationship’?

Interactions
Relationship
‘involves a series of interactions over time between two individuals known to each other’
Dyadic

Long-term
Affectional (social) bond
‘... tie in which the partner is important as a unique individual and is interchangeable with none other’
Characteristics of an individual

Social support
Attachment
‘an affectional bond with the added experience of security and comfort obtained from the relationship’
Characteristics of an individual

Methods to investigate the dog-human relationship

- Questionnaires
- Physiological measures
  - Oxytocin and cortisol, HR, blood pressure
- Behaviour
  - The Strange Situation Procedure (SSP)
Methods to investigate the dog-human relationship

- **Questionnaires**
  - **Attitudinal**
    - I feel that pets should always be kept outside.
    - You should always treat your pets with as much respect as you would a human member of your family.
    - I love my pet because it never judges me.
    - My pet means more to me than any of my friends.

Methods to investigate the dog-human relationship

Questionnaires
Monash-Dog-Owner-Relationship-Scale (MDORS)
Exchange theory, social support theory

How often does your dog stop you doing things you want to?

How often do you tell your dog things you don't tell anyone else?

My dog is there whenever I need to be comforted.

Dwyer et al, 2006
Methods to investigate the dog-human relationship

- Physiological measures
  - Cortisol
  - HR (V)
  - Blood pressure
  - Oxytocin
  - $^2$-endorphin, prolactin etc.

Methods to investigate the dog-human relationship

Physiological measures

<table>
<thead>
<tr>
<th></th>
<th>Human Before</th>
<th>Human After</th>
<th>Dog Before</th>
<th>Dog After</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP (mmHg)</td>
<td>87.6</td>
<td>84.4</td>
<td>91.0</td>
<td>87.7</td>
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<tr>
<td>$^2$-endorphin (pmol/L)</td>
<td>3.1</td>
<td>8.0</td>
<td>1.2</td>
<td>2.8</td>
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<tr>
<td>Oxytocin (ng/L)</td>
<td>2.1</td>
<td>4.0</td>
<td>0.1</td>
<td>0.5</td>
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<tr>
<td>Prolactin (ng/L)</td>
<td>9.2</td>
<td>11.6</td>
<td>38.5</td>
<td>39.0</td>
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<tr>
<td>Dopamine (pg/L)</td>
<td>86.5</td>
<td>107.0</td>
<td>35.0</td>
<td>60.5</td>
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<tr>
<td>Cortisol (mmol/L)</td>
<td>317.0</td>
<td>309.0</td>
<td>366.5</td>
<td>416.0</td>
</tr>
</tbody>
</table>

Methods to investigate the dog-human relationship

Attachment

- Assymmetrical relationship
- Attached individual (child): Security and comfort
- Figure of attachment (parent): Protection and care

‘DOGS SHOW ATTACHMENT BEHAVIOURS TOWARDS THEIR OWNER’

Topál et al, 1998; Fallani et al, 2006; Gácsi et al, 2001; Palmer & Custance, 2008; Mariti et al, 2013
Methods to investigate the dog-human relationship

Different attachment styles in humans

- Secure attachment
  - Turns to parent for comfort, contact is effectively calming the child
  - Available, sensitive to the child’s needs and changes in the child’s behaviour

- Insecure ambivalent attachment: prolonging dependence
- Insecure avoidant attachment: pushing independence
- Disorganized attachment

Ainsworth et al, 1978; Bretherton, 1985; Main, 1990; Rothbaum et al, 2000
Exaggerated focus on 'secure attachment style in dogs?

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The future

• Investigate different styles of attachment in dogs

• Take into consideration both the dog’s and the owner’s actions in the relationship: what? how? pattern?

• Use reunion events as the core measure to assess these styles
  • Clearly differs in the behaviour according to familiarity to the human
  • Differs according to the duration of separation from the owner
  • Differs according to how the human initiates contact

Rehn et al, 2013; Rehn & Keeling, 2011; Rehn et al, unpublished
Welfare implications for the dog

All attachment styles are functional (except for the disorganized style)

Added value of successful relationships

Owner’s requests and expectations

Highly dependent on owner behaviour

Owner cannot be together with the dog large parts of the day

Mismatch between rehomed dogs and the new owner
References

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