Behavioral Differences Between Indoor and Indoor-Outdoor Felines

Elizabeth Terilli
Feline Development

- 37 million felines in American households (73 million in America) (ASPCA 2015)
- 50-60% are indoor
- Socialization begins at early stages in life - two-seven weeks (Beaver, 2015)
- Anxiety develops from 12-36 months (Beaver, 2015)
- Solitary hunters and territorial animals
Adoption and Euthanasia

- 7.6 million sheltered cats yearly, 37% adopted (ASPCA, 2015)
- 1.4 million felines euthanized yearly (ASPCA, 2015)
- Adoption issues - leading to euthanasia, relinquishment (Jongman, 2007)

https://d3td2int7n7ihj.cloudflare.net/cdn/farfuture/gwAOAswzdU2PGjNRJeCf0gYGA1fsq4WFsrrZw-EO88/mtime:1447700819/sites/default/files/Euth_species.PNG
Addressing Feline Behavioral Problems

- Gentling - a type of relaxed petting (Gourkow, 2014)
- Adopting cat at a young age (Stella, 2014)
- Drug therapy used to decrease elimination/urination (Beaver, 2004)
- Parameters (such as boundaries) for cats can be beneficial in a multi-animal environment (Heldenberger, 1997)
- Daily play with felines (Arhent, 2013)
Human-Feline Interactions

- The more daily play there is, the more communication there will be (De Gracca, et al., 2014)
- Commitment and loyalty can influence the level of interaction (Frank, 2015)
- Stress can come from lack of environmental management, mistrust, and miscommunication (Wedl, 2011)
Indoor Versus Indoor-Outdoor Felines

- Indoor-outdoor have a shorter life span
- Indoor felines exhibit more attachment behaviors (Şerbănoiu, 2006)
- Indoor-outdoor felines showed higher play and aggressive behaviors (Şerbănoiu,

Research Question

What are the behavioral differences of an indoor feline versus an indoor-outdoor feline?
Goals

- Helps to solve social and communication problems between owners and felines
- Decrease the risk of stress and separation anxiety
Hypotheses

- $H_0$: There will be no differences in how the indoor or indoor-outdoor feline interacts with their owner.
- $H_1$: If the indoor-outdoor feline is more cognitively aware of the outdoors, then they will interact less with their owner.
- $H_2$: If the indoor feline is less cognitively aware of the outdoors, then they will be more interactive with their owners.
Methods

1. (Eleven) Felines, adjustment period of 10-15 minutes
2. Informed consent & survey
3. Toys are handed out to owners
4. Observation of seven minutes (felines and owners)
5. Recording of data
6. Felines are brought back into cages
7. Stipend
Survey

1. What is the age of your feline?
   Male     Female

2. What is the gender of your feline?
   Male     Female

3. Is your cat living with other felines?
   Yes     No

4. Does your cat ever go outside?
   Yes     Sometimes     No

5. If so, how many hours a day? __________

6. Has your cat experienced anxiety within the past six months?
   Yes     Sometimes     No

7. How often do you interact and/or play with your feline daily?
   An hour or less     Two-four hours     More than four hours

8. Is your cat aggressive toward:
   a) Family members?   b) Other people?   c) Other felines?

9. Interaction with owners:
   a) affectionate
   b) demanding for attention/showing superfluous amount of affection
   c) little/minimal affection
<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>Multi-Cat or Single Cat</th>
<th>Indoor or Indoor-Outdoor Felines</th>
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</thead>
<tbody>
<tr>
<td>13</td>
<td>Female</td>
<td>Multi-cat</td>
<td>Indoor-outdoor</td>
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<tr>
<td>15</td>
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<td>Multi-cat</td>
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<tr>
<td>4.5</td>
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<td>Multi-cat</td>
<td>Indoor-outdoor</td>
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<td>3</td>
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<tr>
<td>3</td>
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<td>Ears Perked</td>
<td>Looked out window</td>
<td>Unengaged with Owner</td>
<td>Engaged with Owner</td>
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</table>
Ears Perked
Looked out Window
Unengaged with Owner
Pupil Dilation
Relaxed
Exploring Environment
Engaged with Owner

Feline Interactions
Indoor-Outdoor Felines Response to Bird Calls

- Harsh meow
- Wagging Tail
- Head/eyes focus
- Head tilt
- Pupil Dilation
<table>
<thead>
<tr>
<th></th>
<th>Indoor-Felines (out of 5)</th>
<th>Indoor-Outdoor Felines (out of 6)</th>
<th>Chi-Squared</th>
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<tbody>
<tr>
<td>Ears perked</td>
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<tr>
<td>Pupil dilation</td>
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<td>Total Felines: 11</td>
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<td>Avg.: 4.95</td>
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</table>
Total Felines: 11

Engaged with owner

Relaxed

Exploring environment

Looked out window

Pupil dilation

Ears perked

Feline Behavior Comparisons

Indoor-Felines (out of 5)

Indoor-Outdoor Felines (out of 6)

Chi-Squared
Discussion

- P-value > .05
- Feline type did not affect study
- Feline adjustment period, anxiety or changes in environment
- Multi-cat vs. single cat
Conclusion

- More time felines spent outside, less receptive they were to owners
- Significantly different behaviors
- Bird calls identified receptive behaviors
- Confirms indoor felines show more attached behaviors to their owners
Future Research

- Larger data set
- Study gender roles of felines
- Further assess behavioral differences
- Studying felines in environments
- Vocalization
- Feline interactions with other animals
Acknowledgments

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- Helena Terilli, Terence Terilli

http://lifelinecatbehavior.com/paula-garber/
Bibliography


