**Should The Cat in The Hat Keep Talking Like That? Educational Correlates of Anthropomorphism in Children’s Science Media**

Supplemental Materials

Table S1

*Amount and Percent of Different Types of Anthropomorphic Entities, By Media Type*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **All Media (N=146)** | **Books (N=43)** | **Videos (N=103)** |
| **Type of Anthropomorphized Entity** | **Number** | **Percentage** | **Number** | **Percentage** | **Number** | **Percentage** |
| Naturally Living Thing | 122 | 83.5% | 38 | 88.4% | 84 | 81.6% |
|  *Mammal* | *102* | *71.3%* | *32* | *74.4%* | *70* | *68.0%* |
|  *Bird* | *71* | *49.7%* | *24* | *55.8%* | *47* | *45.6%* |
|  *Dinosaur* | *13* | *9.1%* | *2* | *4.7%* | *11* | *10.7%* |
|  *Amphibian or Reptile* | *49* | *34.3%* | *19* | *44.2%* | *30* | *29.1%* |
|  *Fish* | *49* | *34.3%* | *10* | *23.3%* | *39* | *37.9%* |
|  *Snail or Crustacean* | *22* | *15.4%* | *7* | *16.3%* | *15* | *14.6%* |
|  *Insect, Worm, or Spider* | *43* | *30.0%* | *16* | *37.2%* | *27* | *26.2%* |
|  *Plant, Tree, or Fungus* | *18* | *12.6%* | *3* | *7.0%* | *15* | *14.6%* |
|  *Bacteria or Other Microscopic Organism* | *1* | *0.7%* | *1* | *2.3%* | *0* | *0.0%* |
| Object | 43 | 29.5% | 7 | 16.3% | 36 | 35.0% |
|  *Planet or Other Large Object* | *9* | *6.3%* | *3* | *7.0%* | *6* | *5.8%* |
|  *Artifact* | *9* | *6.3%* | *1* | *2.3%* | *8* | *7.8%* |
|  *Computer, Robot, or Technology* | *29* | *20.3%* | *3* | *7.0%* | *26* | *25.2%* |
|  *Other* | *4* | *2.8%* | *3* | *7.0%* | *1* | *1.0%* |
| Fantasy Creature | 18 | 12.3% | 1 | 2.3% | 17 | 16.5% |
| Other | 8 | 5.5% | 1 | 2.3% | 7 | 6.8% |

*Note:* Each piece of media could contain more than one type of anthropomorphized entity, so the numbers in the columns do not necessarily sum to the total number of pieces of media.

Table S2

*Anthropomorphic Property Proportion Scores, By Entity Type and Media Type*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **All Media (N=146)** | **Books (N=43)** | **Videos (N=103)** |
| **Type of Anthropomorphized Entity** | **Range** | **Average** | **Range** | **Average** | **Range** | **Average** |
| Naturally Living Thing (N=122) | 0 – 1 | 0.58 | 0 – 1 | 0.5 | 0 – 1 | 0.62 |
| Object (N=43) | 0 – 1 | 0.16 | 0 – 0.75 | 0.073 | 0 – 1 | 0.19 |
| Fantasy Creature (N=18) | 0 – 0.88 | 0.083 | 0 – 0.63 | 0.015 | 0 – 0.88 | 0.11 |
| Other (N=8) | 0 – 0.88 | 0.04 | 0 – 0.13 | 0.003 | 0 – 0.88 | 0.056 |
| Total | 0.063 – 0.47 | 0.22 | 0.063 – 0.34 | 0.15 | 0.063 – 0.47 | 0.24 |

Table S3

*Anthropomorphic Property Proportion Scores, By Type of Anthropomorphism and Science Topic*

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Anthropomorphism** | **Science Topic** | **Proportion Score** | **Number of Pieces of Media** |
| Naturally Living Thing | Biology | 0.67 | 92 |
| Naturally Living Thing | History | 0.58 | 5 |
| Naturally Living Thing | Physics | 0.41 | 22 |
| Naturally Living Thing | Process | 0.44 | 3 |
| Object | Biology | 0.07 | 15 |
| Object | History | 0.04 | 1 |
| Object | Physics | 0.37 | 26 |
| Object | Process | 0.16 | 1 |
| Fantasy Creature | Biology | 0.07 | 11 |
| Fantasy Creature | History | 0.44 | 3 |
| Fantasy Creature | Physics | 0.06 | 4 |
| Fantasy Creature | Process | 0 | 0 |
| Other | Biology | 0.001 | 1 |
| Other | History | 0.15 | 1 |
| Other | Physics | 0.11 | 6 |
| Other | Process | 0 | 0 |
| Total | Biology | 0.20 | 93 |
| Total | History | 0.30 | 6 |
| Total | Physics | 0.24 | 43 |
| Total | Process | 0.15 | 4 |

Table S4

*Number of Media Containing Explicitly or Implicitly Stated Educational Content, By Media Type and Educational Content*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **All media (N=146)** | **Books (N=43)** | **Videos (N=103)** |
| Explicitly Stated | 131 | 32 | 99 |
|  Biology | 86 | 26 | 60 |
|  History | 5 | 1 | 4 |
|  Physics | 37 | 4 | 33 |
|  Process | 3 | 1 | 2 |
| Implicitly Stated | 15 | 11 | 4 |
|  Biology | 7 | 5 | 2 |
|  History | 1 | 1 | 0 |
|  Physics | 6 | 4 | 2 |
|  Process | 1 | 1 | 0 |

Table S5

*Number of Media Containing Weakly, Moderately, and Strongly Present Educational Content, By Media Type and Science Topic*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **All media (N=146)** | **Books (N=43)** | **Videos (N=103)** |
| Weak Presence | 25 | 5 | 20 |
|  Biology | 13 | 2 | 11 |
|  History | 1 | 0 | 1 |
|  Physics | 9 | 2 | 7 |
|  Process | 2 | 1 | 1 |
| Moderate Presence | 28 | 4 | 24 |
|  Biology | 19 | 4 | 15 |
|  History | 0 | 0 | 0 |
|  Physics | 9 | 0 | 9 |
|  Process | 0 | 0 | 0 |
| Strong Presence | 93 | 34 | 59 |
|  Biology | 61 | 25 | 36 |
|  History | 5 | 2 | 3 |
|  Physics | 25 | 6 | 19 |
|  Process | 2 | 1 | 1 |

Table S6

*Anthropomorphic Property Proportion Scores, By Type of Anthropomorphism and Explicitness of Educational Content*

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Anthropomorphism** | **Explicitness of Educational Content** | **Proportion Score** | **Number of Pieces of Media**  |
| Naturally Living Thing | Explicitly Stated | 0.59 | 110 |
| Naturally Living Thing | Implicitly Stated | 0.50 | 12 |
| Object | Explicitly Stated | 0.17 | 40 |
| Object | Implicitly Stated | 0.08 | 3 |
| Fantasy Creature | Explicitly Stated | 0.09 | 18 |
| Fantasy Creature | Implicitly Stated | 0 | 0 |
| Other | Explicitly Stated | 0.04 | 8 |
| Other | Implicitly Stated | 0 | 0 |
| Total | Explicitly Stated | 0.22 | 131 |
| Total | Implicitly Stated | 0.14 | 15 |

Table S7

*Anthropomorphic Property Proportion Scores, By Type of Anthropomorphism and Presence of Educational Content*

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Anthropomorphism** | **Presence of Educational Content** | **Proportion Score** | **Number of Pieces of Media**  |
| Naturally Living Thing | Weak | 0.62 | 23 |
| Naturally Living Thing | Moderate | 0.58 | 21 |
| Naturally Living Thing | Strong | 0.57 | 78 |
| Object | Weak | 0.12 | 5 |
| Object | Moderate | 0.24 | 12 |
| Object | Strong | 0.14 | 26 |
| Fantasy Creature | Weak | 0.025 | 1 |
| Fantasy Creature | Moderate | 0.04 | 2 |
| Fantasy Creature | Strong | 0.11 | 15 |
| Other | Weak | 0.04 | 1 |
| Other | Moderate | 0.09 | 3 |
| Other | Strong | 0.03 | 4 |
| Total | Weak | 0.20 | 25 |
| Total | Moderate | 0.24 | 28 |
| Total | Strong | 0.21 | 93 |