The Observation of Human-Animal Interaction for Research (OHAIRE) is a timed interval coding system intended to capture the unique interactions between humans and animals. It was originally developed and piloted with children with autism spectrum disorder (ASD) interacting with typically-developing peers in a small group school setting with guinea pigs compared to toys (PLoS ONE, 2013). The OHAIRE Version 3 (OHAIRE-V3) was expanded and updated from its original version to enhance the accuracy and efficiency of administration (Guérin et al., 2016).

When can it be used?
It is currently being used to capture interactions with multiple species, including dogs, horses, and guinea pigs. It can be used for videos both with and without an animal present. This enables blinded coding of interactions before and after the presence of an animal.

What does it capture?
The primary areas the OHAIRE-V3 captures are social communication behaviors, emotional displays, interactions with animals and control objects, and social withdrawal behaviors.

Overview
Dr. Marguerite O’Haire, Dr. Robin Gabriels, & Dr. Monique Germone

Online System
The coding tool uses an online coding system through Qualtrics to facilitate ease of coding and reduction of data entry errors associated with paper-and-pencil based measures. We can work with your team to develop a system that meets your study design and needs.

Reliability
In the latest version, OHAIRE-V3, excellent reliability can be achieved when coders are trained by the original trainer (primary) or a subsequent trainer (secondary). It yields high inter-rater reliability in populations with ASD (mean $k = 0.85$) as well as typical development (mean $k = 0.83$), where levels above 0.75 are considered excellent.

References


FOR MORE INFORMATION
EMAIL
ohairecoding@gmail.com
### The OBSERVATION OF HUMAN-ANIMAL INTERACTION FOR RESEARCH coding system

#### - Captured Behaviors -

<table>
<thead>
<tr>
<th>Target</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Communication</strong></td>
<td></td>
</tr>
<tr>
<td>Peer</td>
<td>Verbal communication</td>
</tr>
<tr>
<td>Human within the same age cohort</td>
<td>Communicative movement of the body</td>
</tr>
<tr>
<td>Adult</td>
<td>Gestural</td>
</tr>
<tr>
<td>Human older than the age cohort of the participant (if children)</td>
<td>Looking at a specific target</td>
</tr>
<tr>
<td><strong>Environmental Interactions</strong></td>
<td></td>
</tr>
<tr>
<td>Animal</td>
<td>Tactile</td>
</tr>
<tr>
<td>Live, non-human animal</td>
<td>Physical contact</td>
</tr>
<tr>
<td>Object</td>
<td>Affection</td>
</tr>
<tr>
<td>Inanimate experimental object</td>
<td>Physical affection, emotional warmth</td>
</tr>
</tbody>
</table>

#### Emotional Display

<table>
<thead>
<tr>
<th>Target</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facial</strong></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Smiling</td>
</tr>
<tr>
<td>Laughing</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>Frowning, whining, crying, tantrums</td>
</tr>
<tr>
<td>Other</td>
<td>No discernable affect/emotion OR face obscured during the entire segment</td>
</tr>
</tbody>
</table>

| **Vocal** |                                           |
| Statements about positive emotions or positive experiences, and compliments |
| Statements about negative emotions or negative experiences, and complaints |
| No speaking, or factual statements without opinion, small talk |

#### Other Behaviors

<table>
<thead>
<tr>
<th>Target</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aggression</strong></td>
<td>Potentially harmful behavior</td>
</tr>
<tr>
<td><strong>Overactivity</strong></td>
<td>Fidgety, overactive behavior</td>
</tr>
<tr>
<td><strong>Isolation</strong></td>
<td>Solitary or isolated activity</td>
</tr>
</tbody>
</table>

For more information, email: ohairecoding@gmail.com
Protocol

Children should be video-recorded continuously during unstructured interaction opportunities. The coding system is intended to capture naturalistic behavior, as it occurs in the absence of scheduled or structured activities. However, if there are multiple participants or conditions, it is recommended that sessions be standardized and consistent to allow for comparisons across conditions or over time.

Available materials should give participants opportunities to engage in both social and isolated behaviors. For example, providing participants a variety of toys that can accommodate both group and solitary play. Activities that only encourage solitary behaviors, such as reading quietly, do not allow for coding social behaviors. Likewise, interventions that prompt participants to engage only in social behaviors do not allow for coding isolated behaviors.

Social Communication

In order to code social communication behaviors, there should be at least one other person in the frame of the video. In many cases, activities should include at least one adult and one peer if the research question addresses social communication behaviors with partners of different age cohorts.

The person behind the video camera should not initiate communication with participants, because the coding tool is not designed to code this type of interaction.

Interactions with Animals and Objects

Study Design

Depending on your research questions, you may choose to code the behavior of participants during the intervention, or at another time (e.g., before and after the intervention). Choosing to examine the behavior during the intervention will provide insight into the effects of the interactions taking place between the participant, his or her social environment, and the animals or experimental objects. Choosing to code the behavior outside the intervention enables blinding raters to the experimental and control conditions and explores the generalizability of the effects of the intervention. Neither design is superior, but each is designed to answer specific questions.

Animals

Any animal species can be included for coding with the OHAIRE. To date, the OHAIRE has been used to code the outcomes of animal-assisted activities with guinea pigs, horses, and dogs.

Objects

We recommend including a control condition that incorporates similar activities to the ones with animals. For example, to control for the novelty of the animal, it may be suitable to include experimental objects that are also novel to participants.

Control condition experimental objects that have been used in studies previously coded with the OHAIRE include a set of toys or one interesting toy (e.g., marble/ball ramp toy), a life size stuffed horse, and a stuffed dog.

Video Recording

Image

The image quality should allow coders to discern participants’ facial expressions, such as smiling or frowning, as well as the direction and target of eye contact. The video sample should include a wide enough angle to include the environment and all potential social interaction partners. The recording of a participant’s perspective (e.g., a camera mounted on a child’s helmet) should not be used, as this would limit the ability to view the participant’s facial expressions in response to the environment.

Sound

Recording sound quality should be high enough to hear vocalizations including cries, talking, and the content of conversations during playback.

Recording materials

To ensure data integrity, we recommend periodic checks of the output data files. Data files should be saved in a video format (typically .mp4 or .mov), and demonstrate sufficient image and sound quality. Additionally, we recommend checking the battery life and the memory usage of the recording device before each day of filming.

File organization

File naming

To ease the identification and selection of video files for coding, these should be organized and named consistently. File naming can refer to the condition, participant, or time of the recorded session. We will subsequently blind our coders to this information in order to reduce bias.

File transfer

We recommend using the Globus research data management cloud to transfer video files to our team.

Participant list

To facilitate the identification of participants during video coding, we recommend taking a photograph of each participant and collating the pictures in a folder with participants’ names or study identification numbers.

For more information

Email

OHAIRECODING@GMAIL.COM
The Observation of Human-Animal Interaction for Research - Version 3 (OHAIRE-V3) Coding System

Marguerite E. O’Haire, Robin L. Gabriels, & Monique M. Germone

Original manual published February 2013 (OHAIRE-V1)
Modified manual drafted December 2014 (OHAIRE-V2)
Second modified manual drafted May 2016 (OHAIRE-V3)
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INTRODUCTION

Purpose
The Observation of Human-Animal Interaction for Research – Version 3 (OHAIRE-V3) was designed to evaluate children’s social behavior in naturalistic settings that may or may not include animals.

Participants
The OHAIRE-V3 was specifically created for use in research with children ages 4 to 16 years, but may also be suitable for individuals of other ages. Children must be with at least one other person during sessions to allow for the coding of social behaviors. The child being observed is known as the primary participant. The coding system allows for the primary participant to engage in social behaviors with various targets, including, but not limited to: peer, adult, object, and animal.

Setting
Children should be video-recorded continuously during unstructured interaction opportunities. The coding system is intended to capture naturalistic behavior, as it occurs in the absence of scheduled or regimented activities. If there are multiple participants or conditions, it is recommended that sessions be standardized and consistent to allow for comparisons across conditions or over time. Available activities should give opportunities to engage in both social and isolated behaviors. For example, participants can be provided with a variety of toys that can accommodate both group and solitary play. Activities that only encourage solitary behaviors, such as reading quietly, don’t allow for the coding of social behaviors. Likewise, interventions that prompt participants to engage in social behaviors don’t allow for the coding of isolated behaviors.

Video Recording
The video sample should include a wide enough angle to include the environment and all potential social interaction partners. Ideally, the quality should be high enough to view the details of participants’ faces to capture emotional displays such as smiling or frowning as well as eye contact. The person behind the video camera should not initiate communication with the participants because it is difficult to code this interaction and may not be consistent across sessions.

Sampling
The coding system focuses on 10-second intervals within one-minute video segments. You should have a total of six 10-second intervals per minute. To minimize coding time, it is recommended that a subset of one-minute segments be randomly selected from each session, rather than coding the entire session. A suitable strategy is to divide the session into three equal parts, constituting the beginning, middle, and end of the session. Then randomly select one minute from each part to code.

Coding
The purpose of the OHAIRE-V3 coding system is to assess the presence or absence of a given behavior during a 10-second interval. The frequency of occurrence within the interval is not coded. For example, the behavior is coded as present regardless of whether it occurred 1 time or 10 times during a segment. This provides a score out of 6 for each behavior. For example if the behavior occurs in five 10-second intervals, the score would be 5/6. The quality of
behaviors is not evaluated in this version of the coding system version; however, it will be a future direction in later versions.

**Format**
The OHAIRE-V3 coding system is suitable for use on both paper and online mediums. The use of an online platform through a survey software is recommended to reduce the time and error associated with paper-based data entry.

**Scale Development**
Since the beginning of its development in 2012, the OHAIRE coding tool has undergone updates in order to maximize the clarity of the manual and the reliability and validity of the data it generates.

1) February 2013 – publication of the OHAIRE
2) December 2014 – OHAIRE –V2
3) May 2016 – OHAIRE V3

**Training**
Training is organized by the OHAIRE lab at the Center for the Human-Animal Bond of Purdue University. It includes:
- A 2-hour in-depth exploration of the manual with example videos.
- Training to data export and troubleshooting in Qualtrics.
- Training to data scoring and reliability assessment in SPSS.
- Individualized training with videos from the setting and population to be used in the study.

Currently, all coding is conducted by personnel affiliated with the center.

**Reliability**
In order to calculate inter-rater reliability, we recommend that one rater code the entire set of videos (100%) and a second rater code 20% of the videos. Inter-rater reliability will then be calculated with Cohen’s kappa on the subset of videos that both rater coded. The SPSS syntax file “Reliability_Syntax_OHAIRE_V3.sps” accompanying this manual calculates reliability directly from the OHAIRE-V3 coding Qualtrics output.

**Scoring**
Scoring of the OHAIRE-v3 is performed only with the data coded by the primary rater. The SPSS syntax file “Reliability_Syntax_OHAIRE_V3.sps” accompanying this manual scores the OHAIRE-V3 directly from the Qualtrics output.

**Data interpretation**
As a behavior coding tool, the OHAIRE-V3 measures only observable, quantifiable behaviors. It follows that the OHAIRE-V3 scores do not directly provide information about mental states. However, when trying to understand the experience of the participants, a number of associations can be made between behaviors and mental states. For example, feeling anxious is a subjective experience, but it may be associated with behaviors such as overactivity, isolation, aggression, or vocalizations indicating worry. This kind of interpretation will be best supported by correlations with questionnaires addressing the mental state of interest.
The online coding system can be accessed at www.ohairecoding.com. Below is a screenshot of the format for the first 10-second segment.
The following advice may be useful when using the OHAIRE-V3 coding system.

**Timing Tips**

- There are three options for timing:
  - **Option 1:** Use ELAN software. Instructions to use this can be found in the document titled "ELAN_instructions_OHAIRE-V3.docx."
    - *This is the preferred and recommended method for achieving high inter-rater reliability.*
  - **Option 2:** Use a **stopwatch** or alarmed timer for each 10-second segment to ensure that primary focus is on the video rather than the clock.
  - **Option 3:** Use the clock timer on the video screen.

**Audio Tips**

- Use **headphones** to focus on and most accurately listen to verbal speech.

**Video Tips**

- Watch the videos in **full screen** to view each 10-second segment. When the timer alarms at the end of the segment, minimize the video and record codes in the online system.
- Tip for Mac computers: Use the keyboard shortcut Command-Tab to switch between programs.
- Tip for PC computers: Use the keyboard shortcut Alt-Tab to switch between programs.
- Tip for iPhone, iPad, smartphone, or tablets: View the video on the computer and enter coding on the handheld device.

**General Tips**

- If you are unsure about what you have heard or seen, use the **“three rule.”** If after playing a video segment three times you are still unable to decipher a behavior or vocalization, code the behavior as absent or unknown (“No”). Reliability is greater if you only watch each 10 second video clip a maximum of 3 times.
- Not all behaviors will be coded. If there is not a code in the online system for a given behavior, it does not need to be coded.
- To ensure recall at the end of the segment, feel free to take notes in the NOTES section at the bottom of each webpage and later use this to enter the codes above.
The Emotional Display codes are NOT mutually exclusive, and many can occur within the same 10-second coding segment. Code specific affect behaviors based on facial expressions.

**FACIAL**

**POSITIVE**
This code should be used for behavioral displays indicative of positive affect and/or emotion. It should be a clear and obvious change from a neutral state.

- **SMILE 😊**
  This should be coded if the participant smiles. Smiling is defined as a change in facial expression by turning up the corners of the mouth and/or spreading the lips.

  *Coding tip*
  Mild 😊 is often coded with the Affection code.

- **LAUGH 😊**
  This should be coded if the participant laughs, which often co-occurs with smiling. Audible laughter may be quiet or loud and with or without vocalization. The minimum requirement for vocalized laughter is ONE laugh. The minimum requirement for non-vocalized or silent laughter is TWO laughs with body movement such as shoulders moving (in order to distinguish laughter from heavy breathing or sniffing).

  *Coding tip*
  If the participant smiles AND laughs at the same time, code Laugh 😊. If the participant ONLY smiles, code Smile 😊. Both can occur independently during the 10-second segment.

**Facial Emotional Display**

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>NONE</th>
<th>OBSCURED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smile</td>
<td>Laugh</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NEGATIVE

This code should be used for behavioral displays indicative of negative affect and/or emotion. This includes frowning, whining, crying, or red face. Frowning is defined as a change in facial expression by turning down the corners of the mouth and/or tightening the lips. Whining is defined as a complaining vocalization without scrunching up the face as in crying. This also includes sighing or expressing discontent or frustration (e.g. sighing while rolling eyes). Crying is defined as audible crying sounds which can occur with or without tears. It requires scrunching up of the face in addition to a vocalization.

Coding tip
Extreme ☹️ is often coded with Aggression.

Facial Emotional Display

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>NONE</th>
<th>OBSCURED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smile</td>
<td>Laugh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐️</td>
<td>☐️</td>
<td>☑️</td>
<td></td>
</tr>
</tbody>
</table>
N/A

This code should be selected when a participant shows **no discernable affect/emotion** throughout the *entire* 10-second segment. It includes flat affect or the lack of an emotional expression.

**Coding Tips**

If ANY **Positive** or **Negative** Facial Emotional Display occurred, do NOT select this.

This should NOT be selected if **Obscured** is selected.

**Obscured**

Only code if the participant's face is obscured for **ALL** 10 seconds of the 10-second segment.

**Coding Tips**

If this code is selected, you will be unable to make the following codes which require a view of the participant’s face:

- **Smile 😊**
- **Negative Facial Emotional Display 😞**
- **Look**

**Facial Emotional Display**

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>NONE</th>
<th>OBSCURED</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Icon" /></td>
<td><img src="image2.png" alt="Icon" /></td>
<td><img src="image3.png" alt="Icon" /></td>
<td><img src="image4.png" alt="Icon" /></td>
</tr>
</tbody>
</table>

Updated: October 3, 2016
This includes the content of the speech but not the tone or the facial expression of the subject during speech.

**VOCAL**

Vocalizations about positive content. These include statements about positive emotions or positive experiences, and compliments.

**Coding tips**
Positive Vocal Emotional Display will often co-occur with Positive Facial Emotional Display.

**Examples**

“I like this”
“I’m happy”
“I like the color of the animal” (or another compliment to the animal)
“This is a beautiful dog”
“He is cute”
“I like his outfit”
“Last week I went to a birthday party, it was fun”

### Vocal Emotional Display

<table>
<thead>
<tr>
<th></th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NEGATIVE

Vocalizations about negative content. These include statements about negative emotions or negative experiences, and complaints.

**Coding tips**

Negative Vocal Emotional Display will often co-occur with **Negative Facial Emotional Display**.

**Examples**

“This sucks.”
“I hate this”
“When are we done?”
“I’m bored”
“I’m worried”
“I’m scared”
“I don’t like this”
“What time is it?”
“Yesterday I scraped my knee, it hurt”

---

**Vocal Emotional Display**

<table>
<thead>
<tr>
<th></th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Box]</td>
<td></td>
<td>![Check]</td>
<td></td>
</tr>
</tbody>
</table>
NONE

No speaking or no valenced vocal content occurs throughout the entire 10-second period. Factual statements without opinion. Small talk. Factual questions and factual statements.

**Coding tips**

When a vocal emotional display is coded, the Talk behavior should also be coded.

**Examples**

“What color is the dog?”

“Where is the brush?”

“I had a sandwich for lunch.”

---

**Vocal Emotional Display**

<table>
<thead>
<tr>
<th></th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
INTERACTIVE BEHAVIORS

Interactive behaviors are the occurrence of social communication behaviors or interactions with objects or animals.

Code each 10 second interval as a unique occurrence so that if a subject is already touching a peer at the start of the segment, still code it as touch in the current segment. Social communication does not include mimicking or echolalia.

<table>
<thead>
<tr>
<th>Interactive Behaviors</th>
<th>Social communication</th>
<th>Environmental Interactions</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Peer</td>
<td>Adult</td>
<td>Animal</td>
</tr>
<tr>
<td>Talk</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Gesture</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Look</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Touch</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Affection</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Prosocial</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
TARGET

Each instance of Interactive Behavior should have a target. If you are unsure who/what the target is, select NO.

The target is identified because the primary participant looks in the direction of the target during or immediately prior to interacting and/or the target responds to their communicative attempt. The target determines if the interactive behavior is an occurrence of social communication or environmental interaction.

The behavior of the primary participant may be targeted at any of the following:

> SOCIAL COMMUNICATION

Social communication can be spontaneous or triggered by the initiation of another person. For example the participant may ask for information, make a statement, or respond appropriately to directions given by an adult or peers.

PEERS

Peer is defined as another human within the same age cohort of the primary participant being coded.

If the study is with children, it includes all children in the video.

Can include peers outside of those included as participants in the study.

ADULT

Adult is defined another human who is older than the age cohort of the primary participant being coded.

If there are no children in the study, use Peer as the only category. Do NOT include the Adult category if all people in the video are adults.

If a child is having a conversation with an adult that is outside of the video screen, code this as talk, ONLY if you are positive that the voice is coming from an adult.

*Note:* This happens most often when the child is speaking with the videographer.

Do not code for any other form of Social communication if the person is outside of the video screen. For example, you cannot code look because you can’t tell for sure what the child is looking at.

> ENVIRONMENTAL INTERACTIONS

ANIMAL

Animal is a live, non-human animal included in the study.

CONTROL

Object is defined as any inanimate object that is included in the study as a control for the animal.
FORM

Any incidence of Interactive behavior should fall into one of the following forms. If it does not, then it does not need to be coded.

TALK

Talking is defined as verbal communication that occurs when the primary participant engages in a verbal communicative attempt towards a target. If the target is unknown, code as NO.

To qualify as verbal communication, the participant’s lips are moving and/or there is audible sound when nobody else’s lips are moving.

If the subject articulates words, code the vocal emotional display as positive, negative, or none.

<table>
<thead>
<tr>
<th>Coding tips</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the “three rule.” If you cannot determine whether the person is talking after three viewings, code as NO.</td>
<td>“Uh huh” is Talk when it is used during Social communication.</td>
</tr>
<tr>
<td></td>
<td>“Woooh, whoooh” is NOT Talk if it is not directed towards a person or animal.</td>
</tr>
</tbody>
</table>
GESTURE

Gesturing is a form of Social communication that occurs when the participant engages in a communicative attempt using gestures towards a target. It includes sign language and any other bodily actions that are used to communicate with another person. The aim of the gesture should be to communicate rather than to accomplish a physical task. For example, pointing to an item on the ground is a gesture, but picking an item up off the ground is NOT a gesture.

Talk and gesture can occur at the same time. When this occurs, select the target for BOTH codes.

Gesture does NOT include Touch.

**Coding tips**

- Shaking hands with another person is NOT Gesture (► instead code as Affection)

**Examples**

- Pointing to something to request it or reaching for an item to indicate a desire to have the item
- Waving to greet someone
- Clapping hands to praise someone
- Nodding to indicate “yes” or “no”
- Using hand in a beckoning motion
- Using gestures in conjunction with speech to emphasize or clarify the words (► also code as Talk)
- Using fingers to count or show a quantity in numbers
- Using hands or body to convey anger (► also code as Negative Facial Emotional Display)
- Sign language
- Shoulder shrugging to indicate “I don’t know”
LOOK

Look occurs when the participant is looking in the direction of a specific target. The participant’s gaze should be assessed by the angle and/or direction of their face. If after three viewings you cannot tell where the participant is looking, code as NO.

**Coding tips**

- If the target is not within the frame, this item should NOT be coded.
- Do NOT code if the participant's face is obscured for ALL 10 seconds of the 10-second segment.

**Examples**

- Pointing and looking at a toy with an adult (also code as Gesture)
- Staring “into space” is NOT Looking (instead code as Isolation)
TOUCH

Touch should be coded if the participant comes in **physical contact** with a target that is NOT **Aggression**.

Touch is coded when **any part of the participant’s body** makes contact with any part of the target’s body.

If a participant’s **clothing is touching another person**, assume that their body is also touching and code this as such.

Receiving any object by hand is coded as touching another person (Peer or Adult). Receiving a **Control object** by hand is coded as touching another person (Peer or Adult) and the **Control object**.

In the case of giving or receiving an object by hand, also code as **Prosocial**, with the other engaged person as the target.

<table>
<thead>
<tr>
<th>Coding tips</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch is often coded with <strong>Affection</strong>.</td>
<td>Tapping someone on the shoulder (↔ also code as <strong>Gesture</strong>)</td>
</tr>
<tr>
<td></td>
<td>Hugging someone (↔ also code as <strong>Affection</strong>.)</td>
</tr>
<tr>
<td></td>
<td>Sitting next to someone and having their knees touch</td>
</tr>
<tr>
<td></td>
<td>Transferring an object to another person/being given an object.</td>
</tr>
</tbody>
</table>
Affection should be coded if the participant demonstrates **physical affection and/or emotional warmth** to other humans, objects, or animals.

Do NOT code feeding or grooming an animal as affection; instead code them as **Prosocial**.

Different behaviors are considered Affection **based on the target**, whether human or animal.

Affection to control **Objects** might be observed if the object is a stuffed animal or a doll.

**Coding tips**

Affection is often coded with **Touch**.

<table>
<thead>
<tr>
<th>Examples</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human</strong></td>
<td><strong>Animal</strong></td>
</tr>
<tr>
<td>Holding hands</td>
<td>Cuddling</td>
</tr>
<tr>
<td>Hugging</td>
<td>Hugging</td>
</tr>
<tr>
<td>Shaking hands</td>
<td>Nuzzling</td>
</tr>
<tr>
<td>High-five</td>
<td>Petting</td>
</tr>
<tr>
<td>Patting on back</td>
<td>Smiling</td>
</tr>
<tr>
<td></td>
<td>Cradling</td>
</tr>
<tr>
<td></td>
<td>Leaning head in towards animal to hear its noises or to be closer to the animal (⇨ also code as <strong>Touch</strong>)</td>
</tr>
</tbody>
</table>
**PROSOCIAL**

Prosocial behavior is engaging in behavior that is **purposefully helpful** to another person, animal, or object.

Prosocial behavior towards a toy should ONLY be selected if it is something that will be beneficial to the longevity of the toy, such as cleaning it.

Do NOT code as prosocial behavior if the participant throws something (after being asked to pass something). This would instead be coded as Aggression and Overactivity.

This code does NOT include hand shaking or high fives.

<table>
<thead>
<tr>
<th>Coding tips</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the case of giving an object by hand, also code as Touch.</td>
<td>Handing an item to another person OR receiving an item that has been handed to the participant.</td>
</tr>
<tr>
<td></td>
<td>Holding open a door</td>
</tr>
<tr>
<td></td>
<td>Helping to hold or carry something OR carrying the same thing as another person</td>
</tr>
<tr>
<td></td>
<td>Picking something up for another person or that an animal has dropped (e.g. food fallen from reach)</td>
</tr>
<tr>
<td></td>
<td>Feeding an animal. This includes preparing and placing food in front of the animal (e.g. tearing food into smaller pieces) OR holding food while the animal is eating (also code as Touch).</td>
</tr>
<tr>
<td></td>
<td>Note: You can generally tell that the animal is eating by their head/mouth moving.</td>
</tr>
<tr>
<td></td>
<td>Brushing, grooming, or stroking an animal (also code as Touch).</td>
</tr>
<tr>
<td></td>
<td>Putting things away, cleaning up objects, or cleaning an animal’s cage</td>
</tr>
<tr>
<td></td>
<td>Note: Putting an object away is prosocial towards a person, NOT the object itself.</td>
</tr>
<tr>
<td></td>
<td>Putting an animal back in its cage (also code as Touch).</td>
</tr>
<tr>
<td></td>
<td>Showing another child how to use a toy in a helpful (non-condescending) manner</td>
</tr>
<tr>
<td></td>
<td>Placing hands in front of or on an animal to prevent them from falling off one’s lap or another surface</td>
</tr>
<tr>
<td></td>
<td>Sharing OR giving an object</td>
</tr>
<tr>
<td></td>
<td>Offering comfort</td>
</tr>
<tr>
<td></td>
<td>Putting on a saddle OR putting equipment away (as opposed to standing there and watching someone else do it).</td>
</tr>
</tbody>
</table>
OTHER BEHAVIORS

AGGRESSION

Aggression is any behavior that could potentially cause harm to oneself or others, including animals, as well as property destruction (either emotional or physical).

**Coding Tip**

Aggression is often coded with Extreme (©) Negative Emotional Display.

**Examples**

- Banging body part or object
- Throwing something (unless it is part of a game or activity)
- Slamming doors
- Kicking OR hitting
- Hitting or hurting other humans or animals (including animal hair pulling)
- Saying mean or derogatory comments
- Swearing
- Screaming at self or others
- Stamping feet (unless it is part of a directed activity)
- Self-injury of any form (e.g. head banging, face slapping, self-biting, hair pulling)
- Grabbing a toy from someone else’s hands.

Other Behaviors

<table>
<thead>
<tr>
<th>Aggression</th>
<th>Overactivity</th>
<th>Isolation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer</td>
<td>Adult</td>
<td>Object</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Updated: October 3, 2016
OVERACTIVITY

Overactivity should be coded if the participant is **fidgety or overactive**. This also includes constant motion, moving and vocalizing, compared to others in the video.

**Coding Tip**

If a participant’s behavior is Overactivity, do NOT code as a **Social communication** behavior. For example, if they are shouting and running around disruptively, do NOT code as **Talk**.

**Examples**

- Talking rapidly, loudly and/or excessively using non-scripted speech
- Running and jumping around.
- Interrupting someone who is already speaking
- Excessively active (e.g. constantly running or jumping around the room), restless or unable to sit still (e.g. will not stay in one place or stay seated, pacing around the room, running away, or wandering off)
- Boisterous (inappropriately noisy or rough)
- Ignoring adult and continuing to engage in activity they were asked to stop performing
- Making faces while adult is talking

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Aggression</td>
</tr>
<tr>
<td>Peer</td>
</tr>
<tr>
<td>☐</td>
</tr>
</tbody>
</table>
ISOLATION

Isolation is when a participant is engaging in solitary or isolated activity that is NOT disruptive, but is NOT socially engaged. This includes any self-focused behaviors.

Isolation is when the child is not in close physical proximity to other humans and/or is engaging in a different activity to the other humans.

<table>
<thead>
<tr>
<th>Coding Tip</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep in mind that a child can be isolated for half of the 10-second segment and not for the other half. In this case, you would code BOTH Isolation and Social communication to indicate that both behaviors occurred at least once during the segment.</td>
<td>Playing alone or in solitary activity with an object</td>
</tr>
<tr>
<td></td>
<td>Reading a book</td>
</tr>
<tr>
<td></td>
<td>Head down and silent (or engaging in Sensory behaviors that are NOT Social communication Talk)</td>
</tr>
<tr>
<td></td>
<td>Body turned away from people</td>
</tr>
<tr>
<td></td>
<td>Actively leaving the group</td>
</tr>
<tr>
<td></td>
<td>Walking away without letting someone know where they are going (e.g. going to the bathroom without telling anyone)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
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<td>Aggression</td>
</tr>
<tr>
<td>Peer</td>
</tr>
<tr>
<td>Overactivity</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>![ ]</td>
</tr>
<tr>
<td>Isolation</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>![ ]</td>
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</table>