



Mind-Mindedness Coding Manual

Elizabeth Meins and Charles Fernyhough
Durham University

Version 2.2

Please cite this work as:

Meins, E., & Fernyhough, C. (2015). *Mind-mindedness coding manual, Version 2.2*.

Unpublished manuscript. University of York, York, UK.

This is a working document and suggestions for additions and improvements are always welcome. Please address any correspondence to: elizabeth.meins@york.ac.uk

1. Introduction

Mind-mindedness (MM) refers to individuals' tendency to adopt the intentional stance (Dennett, 1987) in their interactions with and representations of others. In interactional contexts, MM has primarily been investigated in interactions between caregivers and infants, where it gives a measure of the caregiver's proclivity to treat the young child as an individual with a mind, rather than merely an entity with needs that must be satisfied (Meins, 1997). MM grew out of a rethinking of Ainsworth, Bell, and Stayton's (1971, 1974) concept of maternal sensitivity. Although Ainsworth et al.'s original characterisation of maternal sensitivity highlighted the importance of the mother responding appropriately to the child's cues, the broad-based way in which maternal sensitivity was operationalised has meant that this focus has been lost, with sensitivity becoming an umbrella concept for diverse behaviours (see Meins, 2013; Meins, Fernyhough, Fradley, & Tuckey, 2001). MM focuses on the caregiver's willingness or ability to read the child's behaviour with reference to the likely internal states that might be governing it.

Interactional measures of MM are appropriate for assessing MM with infants in the first year of life. In assessing individuals' MM in relation to older children and adults, representational measures of MM have most commonly been used. Longitudinal research has shown that the early observational measure of mind-mindedness relates to the later representational measure (Meins et al., 2003).

2. Changes Made in Version 2.0

Version 2.0 of the Mind-Mindedness Coding Manual incorporates a number of extensions and adaptations to the interview-based coding scheme, and a major change in terminology in the interaction-based coding scheme: mind-related comments

previously referred to as ‘inappropriate’ are now termed ‘non-attuned’. This change was made in order to describe these comments using a less value-laden term, and to reflect the fact that appropriate mind-related comments and non-attuned mind-related comments are separate facets of caregiver behaviour, and have been found to be unrelated to one another in a number of samples (Arnott & Meins, 2007; Meins et al., 2001; Meins et al. 2012), leading Meins et al. (2012) to argue that mind-mindedness is a multi-dimensional construct.

3. Interactional Measures of Mind-Mindedness in The First Year of Life

MM with infants up to age 12 months is operationalised in terms of the caregiver’s tendency to comment appropriately or in a non-attuned manner on the infant’s putative internal states during on-line interactions. In our research, we have obtained measures of MM in the first year of life from laboratory-based observations of infant–caregiver interactions. For very young infants, it is preferable to code MM from face-to-face interactions with the child in a baby seat on a table and a mirror placed on the table so that the mother’s face can be clearly seen. Face-to-face interactions of this sort should ideally last for 3 to 5 minutes. For children aged 6 months and above, MM should be coded from free play sessions where a range of age-appropriate toys is provided. We have typically used a 20-minute play session to obtain measures of MM, but shorter sessions may be used. Regardless of the age of the infant or the precise observational set-up, the caregiver is given only one instruction: *Please play with your baby as you would do if you had some free time together at home.*

Although we have used laboratory-based observations, the coding scheme would also be suitable for using in the home. The crucial issue is that the child and

caregiver are free to interact without external distractions, so for any home-based observations, researchers should ensure that friends and other family members will not be present, leaving the caregiver free to focus exclusively on the child.

In order to code MM accurately, it is crucial to be able to establish how the caregiver's comment maps onto the child's behaviour. Is the comment a response to a gesture or facial expression from the child? Is the caregiver's attention focused on the child before or while making this comment? Were the child and caregiver jointly attending to something when the comment was made? Because of the importance of these questions for the accurate coding of MM, it is essential to have the best possible view of both the caregiver and child at all times, so researchers should plan the layout of the observation room and the positioning of cameras very carefully. It is good to be wary of recording the interactions using a split-screen technique, since while this may enable you to see both people's faces clearly, it often makes it difficult to know precisely where the caregiver or child is looking and thus whether the caregiver's comments are in response to the child's behaviours.

Once the observation has been recorded, the interaction can then be transcribed verbatim. The level of detail included in the transcript (e.g., infant or caregiver actions) may vary depending on the extent to which researchers are interested in additional infant and caregiver behaviours, but at the very least, the transcript should include a verbatim account of everything the caregiver said during the interaction. Before coding, the lead researcher should decide how to section the caregivers' speech into individual comments. These decisions should be based on temporal (1 second pause) or semantic discontinuities. If the caregiver sings a song or recites a nursery rhyme, each line of the song or rhyme should be classed as a single

comment. Coders should receive the transcript sectioned into the agreed individual comments in order to avoid confusion over what should be classified as a comment.

3.1. Identifying Mind-Related Comments

The transcript can then be used to identify all comments which focus on the child's internal states. We have defined mind-related comments as any comment that (a) uses an explicit internal state term to comment on what *the infant* may be thinking, experiencing, or feeling; or (b) 'puts words into the infant's mouth' with the caregiver talking on the infant's behalf. Comments in the latter category do not necessarily have to contain an internal state term (although they often do), but should clearly be dialogue intended to be spoken by the infant (e.g., "That's a teddy bear, Mummy"). Although sometimes one feels that other types of comment produced by the caregiver may indicate treating the infant as an individual with a mind, in order to obtain the most valid and reliable coding scheme, only comments falling into categories (a) and (b) above are classified as mind-related.

The comments listed below are not intended to be an exhaustive list of all possible mind-related comments, but rather reflect the comments that have been observed in our research. The comments below should, however, give sufficient guidance on how different types of comment should be coded if researchers encounter different mind-related comments in their own observations.

3.1.1. Mind-Related Comments

Desires and Preferences

Like, dislike, don't like, love, want, prefer, favourite, hate, can't stand, "are you after the ball?" (in the sense of wanting to get the ball).

Cognitions

Think (but see *Non-Specific References to Infant's Internal States* in Section 3.1.3 below for “what do you think?”), decide, making a decision, know, recognise, remember, recall, realise, interested, not interested, notice, focused, intent, expect, working it out, fascinated, obsessed, curious, nosy (in the sense of being interested in or curious about something).

Emotions

Had enough, fed up, shy, solemn, self-conscious, happy, sad, scared, afraid, joyful, gleeful, full of the joys of Spring, serious, grumpy, stressed, moody, in a good/bad mood, stroppy, being difficult, worried, anxious, dazed, confused, excited, cross, not feeling yourself, startled, make you jump, surprised, disgusted, bored, angry, bad tempered.

Epistemic States

Teasing, playing games with me, joking, having a joke, playing a joke.

Talking on the Infant's Behalf

Any utterance that is obviously meant to be dialogue said/thought by the infant.

3.1.2. Comments That May or May Not be Mind-Related*Physical States*

If the caregiver comments on the infant's physical state (e.g., tired, hungry, thirsty, hot, cold, etc.) in response to a behaviour from the child indicating that such a reading of their physical state is warranted (e.g., yawning or rubbing eyes to indicate tiredness, rooting or chewing hands to indicate hunger), then these comments should **not** be coded as mind-related. The caregiver may also talk about being tired or hungry

in the context of pretending to eat or sleep, and these should **not** be coded as mind-related. However, if the caregiver states that the child is tired, hungry, etc. *in the absence of any accompanying signs of such a state from the infant*, then these comments should be coded as mind-related (and will always be coded as **non-attuned** – see 3.2.2 below).

Funny/Amusing

Fun, funny, and amusing should be coded as mind-related comments if the caregiver uses these terms in response to the infant finding something fun/funny/amusing or doing something funny/amusing (as indicated by positive affect in the infant). Comments such as “that’s funny/fun/amusing” that refer to other events and which impute no positive affective response to the child should **not** be coded as mind-related.

Clever

If *clever* (“you’re clever”, “that’s clever” “clever girl/boy”) is used in response to the child performing some skilful behaviour (e.g., manipulating a toy, performing a behaviour in response to a request from the caregiver) it should be coded as a mind-related comment. If *clever* is used merely to give positive feedback for generally behaving well (“clever girl/boy”), where a purely non-mentalistic interpretation is possible, it should **not** be coded as mind-related.

Cheeky

Cheeky (“you’re cheeky”, “that’s so cheeky”, “you’re a cheeky boy/girl”) may be mind-related if it is used in response to the child doing something that can be construed as teasing, playful, or against the instructions of the caregiver (e.g., repeatedly putting a toy in their mouth when the caregiver has moved it away and/or asked them not to, repeatedly looking at or for something when the caregiver is trying

to focus their attention elsewhere, knocking over a block tower). Note that **the child's emotional tone should be positive** in order for *cheeky* to be mind-related (e.g., the child smiling, making eye contact with the caregiver). If *cheeky* is used more generally (e.g., “cheeky boy/girl”) and is not in response to any clear teasing or playful behaviour, it should **not** be coded as mind-related.

Intentions

Going to (e.g. “Are you going to play with the car?”, “What are you going to do?”) should **not** be coded as mind-related. *Trying to* should be classified as mind-related if the caregiver also specifies the precise goal that the child is trying to achieve (e.g., “Are you trying to get the block through the hole?”), but general uses of *trying to* (e.g., “What are you trying to do?”) should **not** be coded as mind-related.

3.1.3. Comments That Are Not Mind-Related

Perception

Comments about seeing, watching, looking, listening, touching, tasting should **not** be classified as mind-related.

Saying/talking

Comments about the infant saying something or talking (made in response to vocalisations from the infant) should **not** be classified as mind-related (e.g., “Are you talking to me?”, “What are you saying?”). However, if the caregiver goes on to talk on the infant's behalf and conjecture what the child might be saying, then this is coded as mind-related (see 3.1.1 above).

Non-Specific References to Infant's Internal States

Comments which indicate that the caregiver has noted a change in the infant's internal state, but do not reflect the specific state being experienced (e.g. “What's the

matter/wrong/up?”, “Are you all right/OK?”, “Is that better?”) should **not** be classified as mind-related. Comments such as “Is that nice/good?” or “That’s nice/good” should **not** be classified as mind-related. The non-specific use of *think* in the phrase “What do you think?” should **not** be coded as mind-related.

3.2. Classifying Mind-Related Comments as Appropriate/Non-Attuned

Once all mind-related comments have been identified on the verbatim transcript, they can be coded dichotomously as appropriate/non-attuned by viewing the recorded infant–caregiver interaction. We recommend that researchers coding appropriateness watch the whole of the observation session rather than fast-forwarding to each of the specific mind-related comments. It is important to have a sense of the infant’s emotional state and the types of play engaged in throughout the session to aid one’s judgement of the appropriateness of any specific mind-related comments produced.

Repetitions of specific internal states are counted as separate mind-related comments unless a term is repeated in rapid succession. For example, if a caregiver was observing her child playing with a toy and said, “You like that. (*Is pause*) Yes, you like that”, this would be two mind-related comments. However, if the caregiver had said, “You love, love, love that”, this would be one mind-related comment.

3.2.1. Criteria For Appropriate Mind-Related Comments

Mind-related comments should be coded as appropriate if any of the following criteria are met:

- (a) the researcher agrees with the caregiver’s reading of the infant’s current internal state. For example:

- a. *You want the frog* (said while infant is reaching towards the frog)
- b. *The ball is your favourite thing, isn't it?* (after the infant has demonstrated a repeated preference for playing with the ball)
- c. *Are you thinking?* (said while the infant has a pensive expression)
- d. *You don't like that one* (after the infant has rejected a toy by pushing it away)
- e. *You're fascinated by those animals* (after infant has been focused intently on playing with the animals for several minutes)
- f. *You're such a happy boy* (said while infant is laughing or smiling)
- g. *Are you going all shy?* (after infant coyly turns away)
- h. *Did that scare you?* (after infant was startled by a noisy toy)
- i. *Are you playing games with me?* (after infant has repeatedly disobeyed the caregiver's request not to put a toy in his mouth, smiling at her each time he raises the toy to his mouth)

(b) the comment links current activity with similar events in the past or future.

For example:

- a. *Do you remember seeing a camel at the zoo?* (while the child plays with a toy camel)
- b. *You liked going in the car today, didn't you?* (while playing with a car)
- c. *Do you want to go on the train tomorrow?* (while playing with a train)
- d. *You recognise this because you've got the same one at home*
- e. *You like red, don't you?* (Note that comments such as these where the caregiver is drawing on the child's previous preferences over an extended period of time should be coded as appropriate even if the child hasn't obviously demonstrated a liking of red in the play session.)

These are deemed appropriate because the caregiver is assumed to have previously observed such a preference in the infant and is therefore predicting that he or she will continue to like or dislike new items on this basis. However, if the infant's behaviour is obviously at odds with such a comment, then it should **not** be coded as appropriate.)

- (c) the comment serves to clarify how to proceed after a lull in the interaction. For example, if the infant has been gazing around for several seconds, not focused on any particular object or event, then a comment such as *Do you want to play with the farm?* would be appropriate. Note that such a comment would be **non-attuned** if the caregiver asked this while the child was already actively engaged in attending to or playing with something else (see 3.2.2 below).

3.2.2. Criteria For Non-Attuned Mind-Related Comments

Mind-related comments should be coded as non-attuned if any of the following criteria are met:

- (a) the researcher disagrees with the caregiver's reading of the infant's current internal state. For example:
- a. *You're bored with that one* (referring to a toy with which the infant is still actively playing)
 - b. *You really like the duck* (after the infant has shown no interest in or positive affect towards the duck)
 - c. *Are you tired?* (after the infant has shown no overt signs of tiredness)
 - d. *Grumpy boy* (when the infant appears to be in a good mood)
- (b) the comment refers to a past or future event that is unrelated to the infant's current activity. For example:

- a. *Would you like Granny to come and see you tomorrow?* (having not previously mentioned Granny)
 - b. *Do you want custard for dinner?* (after no previous play or discussion focused on food)
 - c. *Do you want to go swimming when we go on holiday?* (after no previous play or discussion about holidays or swimming)
- (c) the caregiver asks what the infant wants to do or suggests that the infant wants to become involved in a new activity when the infant is already actively engaged in playing with or attending to something else.
- (d) the caregiver seems to be attributing internal states (epistemic states, emotions or desires) that are not implied by the infant's behaviour and which appear to be projections of the adult's own internal states onto the child. For example:
- a. *Are you thinking about Daddy who you love so much?*
- (e) the referent of the caregiver's comment is not clear. For example:
- a. *You like that* (when the infant is not playing with or attending to any particular object or event)

3.3. Indices of Mind-Mindedness Used in Analyses

In our published papers on MM (e.g., Meins et al., 2001, 2012), scores for appropriate mind-related comments and non-attuned mind-related comments are expressed as a proportion of the total number of comments produced by the caregiver during the interaction in order to control for differences in verbosity. Researchers may decide that frequency measures for appropriate mind-related comments and non-attuned mind-related comments are better suited to their projects, but if frequency measures are used, then it is important to control for overall verbosity in analyses.

3.4. Adaptations For Clinical Samples

We have recently reported on MM in mothers suffering from a range of severe mental illnesses who were in a residential mother-and-baby unit (Pawlby et al., 2010). Compared with healthy controls, there was a trend for depressed mothers to achieve lower scores for appropriate mind-related comments on admission, but on discharge no difference was observed. These observations in mothers with severe mental illness have led us to suggest ways in which the MM coding scheme could be adapted for use with clinical samples.

First, it may be instructive to classify mind-related comments in terms of their emotional tone in addition to whether they are appropriate or non-attuned. For example, one of the mothers in the Pawlby et al. (2010) study commented in an irritated voice that her infant ‘was just fascinated with the strap’ on the baby seat, because the child continued to ignore her bids for attention while playing with the strap. Although this mother clearly recognised the focus of her child’s current interest (and was thus making an appropriate mind-related comment), her irritated tone of voice implied that accurately reading her infant’s mind could not help her to improve

the quality of the interaction.

Second, the discourse of mothers with severe mental illness sometimes appeared to indicate that the mother was not interacting with the infant in a way that was appropriate for his or her developmental level. Although such comments did not include references to the infant's internal states (and thus do not fall into the current MM coding scheme), they indexed mothers' inability to take the infant's perspective into account. These comments fell into two main categories: (a) requesting the infant to perform behaviours too sophisticated for his/her age (Requests), and (b) talking to the infant as if he or she was an adult or much older child (Adult Comments).

3.4.1. Requests

These comments involve the caregiver requesting the child to perform an action for her (typically, smiling, talking, holding her hand). For example, asking a 2-month-old infant to "Smile for Mummy", or a 6-month-old infant to "Say, 'Teddy'" or to stand unsupported. These comments should come 'out of the blue' and not be in response to the child smiling, vocalising, etc. in the preceding few seconds.

3.4.2. Adult Comments

These comments appear appropriate to conversations between adults or between an adult and a much older child. They deal with topics about which the infant cannot have any knowledge or understanding, and have no link to the infant's current activity. For example:

(a) *Shall we make stuffed peppers for Daddy's dinner tonight?*

(b) *I had a phone call from Granny who called to see how we were getting along*

(c) *Your daddy would make sure it was all nice and safe wouldn't he?*

He'd do soldiery things

4. Representational Measures of Mind-Mindedness In Preschool and Older Children

In caregivers of children of preschool age and above, we have assessed MM using a brief interview (Meins, Fernyhough, Russell, & Clark-Carter, 1998). Caregivers are first informed that there are no right or wrong answers to the questions in the interview and that they should feel free to talk about the first things that come into their heads. The caregiver is simply given an open-ended invitation to describe the child: *Can you describe [child's name] for me?* If caregivers seek guidance on how to answer the question, the researcher should repeat that no specific type of description is required, and that the caregiver should talk about whatever comes into his/her head. When the caregiver has finished replying, s/he is asked *Can you say anything else about him/her?* [If the caregiver has already given an extensive answer in reply to the first question, this prompt can be omitted.] We usually include two further follow-up questions in the MM interview (*What's the best thing about [child's name]?* and *What do you try to teach [child's name]?*), but the answers to these questions are not analysed as part of the MM assessment.

If the MM interview is the only measure that the caregiver will be completing in the testing session, it is useful first to put the caregiver at ease by asking general questions (e.g., whether the target child has any siblings, whether they attend preschool, their precise age, etc.) before asking the caregiver to describe the child. Caregivers' answers to the *describe your child* question are transcribed verbatim, and each attribute mentioned *that refers to the child* is classified into one of the four

exhaustive and exclusive categories described below (Meins et al., 1998, 2003).

Implicit descriptions **are** coded; for example, if the caregiver said ‘he wears us out’ without explicitly mentioning the relevant attribute (e.g., high activity level).

Note that, unlike in the observation-based MM coding scheme, precise repetitions of specific attributes mentioned during the interview are **not** coded separately, so each attribute can only be coded once. For example, if a caregiver described the child as *happy* twice in the interview, this would only be coded as one attribute, but if the caregiver described the child as *happy* and then as *content*, this would be coded as two attributes. The rationale for treating repetitions differently in the observation and interview MM schemes is that caregivers’ interview-based descriptions of their children are purely representational, so repeating the same mentalistic attribute does not entail a more diverse representation of the child as an individual with a mind. In contrast, mind-related comments in the observation-based scheme are in response to the infant’s behaviour, so repetitions of such comments are meaningful because they index whether the caregiver is reading the infant’s internal states appropriately or in a non-attuned manner over time.

As for the observation measure, the lead researcher should decide how to section the descriptions into individual attributes. The coders should receive the descriptions in sectioned format in order to avoid confusion over what should be classified as an attribute.

4.1. Mental Attributes

Any comment that refers to the child’s mental life, relating to will, mind, interests, pretence, imagination, intellect, knowledge, memory, metacognition (as detailed

under Mind-related comments in Section 3.1 above). The following are also classified as mental:

- (a) Wilful, opinionated, bright, intelligent, clever, mind of his/her own, well-organised, dedicated, conscientious, committed, confident
- (b) Comments about the child's desires or wishes. For example:
 - a. *She wants to be a teacher*
 - b. *She'd like a baby brother or sister*
- (c) Comments about the child's likes and dislikes. Comments about things the child likes doing are coded as mental if they involve an intellectual activity (e.g., s/he likes reading, writing, schoolwork, maths, puzzles, etc.), **but not if they involve a behavioural activity or game** (e.g., s/he likes playing football, watching TV, swimming, X-box, etc. are coded as behavioural – see 4.3 below). For example:
 - a. *He likes animals*
 - b. *She doesn't like her sister playing with her stuff*
 - c. *He loves schoolwork*
- (d) Comments about the child's emotions, but **not** the behavioural manifestations of emotions. For example:
 - a. Happy (but not 'always smiling'), loving (but not 'cuddly'), content, good sense of humour, caring, drama queen, considerate, manipulative, sensitive, thoughtful

4.2. Attributes That May or May Not Be Mental

Occasionally, it is difficult to establish whether a comment should be coded as mental or behavioural. In these circumstances, the preceding or succeeding context may assist in clarifying how the caregiver is intending the term to be used.

Helpful

If *helpful* is used in isolation, then it should be coded as behavioural (see 4.3 below). However, if the caregiver elaborates on the way in which the child is helpful to suggest that this is in response to him or her recognising other people's needs, then this should be coded as mental. For example: "When I've had a hard day and I'm really pushed for time, she's very helpful" would be coded as mental.

Funny

If *funny* is used in isolation, then it should be coded as behavioural (see 4.3 below). However, if the context shows that *funny* is being used to index the child's sense of humour rather than behaviour, then it should be coded as mental. For example: "She's really funny. She knows exactly what to say to make me laugh" would be coded as 2 mental attributes.

Cheeky

If *cheeky* is used in isolation, then it should be coded as behavioural (see 4.3 below). However, if the context shows that *cheeky* is being used to index teasing, manipulation, or wilfulness, then it should be coded as mental. For example: "He's cheeky. He remembers exactly what you've said and then uses it to argue his point" would be coded as mental 2 mental attributes.

4.3. Behavioural Attributes

Any comments that refer to the child's behaviour, such as games and activities the child is involved in, and interactions with others on a behavioural level. The following descriptions are also classified as behavioural:

Lively, talkative, chatty, boisterous, aggressive, passive, friendly, restrained, out-going, naughty, chatterbox, sporty, well/badly behaved, full of fun.

4.4. Physical Attributes

Any physical attributes, such as the child's physical appearance, age, or position in the family. For example:

- (a) *He's my second son*
- (b) *Blond*
- (c) *Three feet tall*
- (d) *He's cut all his teeth now*

4.5. General Attributes

Any comment relating to the child that does not fit into the above categories. For example: *He's a lovely little boy.*

4.6. Recent Adaptions

Research we have been conducting with foster carers and adoptive parents (Greenhow et al., 2015) has led to the introduction of two new categories for caregivers' descriptions of their children: *Self-referential* (previously used only for descriptions of adults) and *Placement*.

Self-referential: comments in which the primary reference is self-focused rather than describing the friend (e.g., “she wears me out”, “challenging”, “difficult”, “loveable”).

Placement: comments on the reason for the child being taken into care or placed for adoption or pre-adoption experiences (e.g., ‘taken into care age 18 months’, ‘five foster care placements before us’, ‘in care for too long before adoption plan made’, ‘did not deserve the treatment that he had’, ‘birth family wanted to keep him’).

4.7. Indices of Mind-Mindedness Used in Analyses

The index of MM is the score for mental attributes, calculated as a proportion of the total number of attributes produced by the caregiver during the interview in order to control for differences in verbosity (Meins et al., 1998, 2003). As before, researchers may decide that frequency measures are more appropriate, controlling for overall verbosity in analyses.

4.8. Adaptation of Describe Your Child Coding Scheme to Assess Emotional Valence

Demers, Bernier, Tarabulsy, and Provost (2010) adapted the existing scheme to assess the emotional valence of mothers’ mentalistic descriptions of their 18-month-olds. They also elaborated the test question somewhat, asking: “*Generally speaking, what strikes you most about your child, how would you describe him/her?*” Demers et al. (2010) reported good inter-rater reliability for coding the emotional valence of mentalistic descriptors.

An alternative to coding the emotional valence specifically of mentalistic attributes would be to treat emotional valence as an orthogonal dimension of caregivers' descriptions of their children, coding the valence of all comments. We have not assessed valence in any of our own studies, but investigating whether caregivers represent their children in positively- or negatively-valenced ways may be a useful addition to the coding scheme, particularly for research involving clinical samples. (See Section 6 below for further adaptations that may be relevant for coding caregivers' descriptions of their children.)

5. Mind-Mindedness in Children

Representational measures of MM have recently been obtained in middle childhood. Children are invited to describe a best friend, and their responses coded as in Section 4 above. For further details see Meins et al. (2006).

6. Mind-Mindedness in Adults' Descriptions of Friends and Partners

Meins, Harris-Waller, and Lloyd (2008) adapted the 'describe your child' interview for use in questionnaire format, assessing young adults' descriptions of close friends. This procedure has also been used to assess young adults' descriptions of romantic partners, famous figures, and works of art (Meins et al., 2014).

Participants provide a written description of a close friend or partner in response to the following prompt: *"Think of a person you regard as a very close friend/your current romantic partner. Please use the space below to tell us a little about this person"*. A space of seven lines was provided for each description.

The resulting text is divided into phrases or single adjectives. Two additional categories were added to Meins et al.'s (1998) coding system: self-referential comments, and relationship comments. Each phrase or adjective is placed into one of the following exclusive and exhaustive categories:

(a) *Mind-minded*: references to the emotions, mental life, and intellect of the person being described (e.g., "he's clever", "a real deep-thinker"), including references to shared mental characteristics (e.g., "we're on the same wavelength").

(b) *Behavioural*: comments about activities or interactions with others that could be interpreted on a purely behavioural level, the person's occupation (e.g., "she's a GP", "he's studying history").

(c) *Physical*: references to any physical characteristics, including age.

(d) *Self-referential*: comments in which the primary reference is self-focused rather than describing the friend (e.g., “he makes me smile”).

(e) *Relationship*: comments that focus on the relationship rather than either of the individuals involved (e.g., “we are like sisters”).

(f) *General*: miscellaneous comments not belonging to any of the above categories (e.g., where the person grew up, stating the person’s name), including non-specific value judgements (e.g., “he’s great”).

References and Papers on Mind-Mindedness

- Arnott, B., & Meins, E. (2007). Links between antenatal attachment representations, postnatal mind-mindedness, and infant attachment security: A preliminary study of mothers and fathers. *Bulletin of the Menninger Clinic, 71*, 132-149.
- Arnott, B., & Meins, E. (2008). Continuity in mind-mindedness from pregnancy to the first year of life. *Infant Behavior and Development, 31*, 647-654.
- Davis, P. E., Meins, E., Fernyhough, C. (2014). Children with imaginary companions focus on mental characteristics when describing their real-life friends. *Infant and Child Development*. DOI: 10.1002/icd.1869
- Demers, I., Bernier, A., Tarabulsky, G. M., & Provost, M. A. (2010). Maternal and child characteristics as antecedents of maternal mind-mindedness. *Infant Mental Health Journal, 31*, 94-112.
- Dennett, D. C. (1987). *The intentional stance*. MIT Press.
- Greenhow, S., Fishburn, S., Meins, E., Jones, C. A., & Hackett, S. (2015). Mind-mindedness in parents who adopted children from the care system. *Manuscript under revision, Social Development*.
- Laranjo, J., Bernier, A., & Meins, E. (2008). Associations between maternal mind-mindedness and infant attachment security: Investigating the mediating role of maternal sensitivity. *Infant Behavior and Development, 31*, 688-695.
- Laranjo, J., Bernier, A., Meins, E., & Carlson, S. (2010). Early manifestations of children's theory of mind: The role of mind-mindedness and infant security of attachment. *Infancy, 15*, 300-323.
- Laranjo, J., Bernier, A., Meins, E., & Carlson, S. M. (in press). The roles of maternal mind-mindedness and infant security of attachment in preschoolers'

- understanding of visual perspectives and false belief. *Journal of Experimental Child Psychology*.
- Lundy, B. (2003). Father- and mother–infant face-to-face interactions: Differences in mind-related comments and infant attachment. *Infant Behavior and Development, 26*, 200-212.
- Lundy, B. L. (2013). Paternal and maternal mind-mindedness and preschoolers' theory of mind: The mediating role of interactional attunement. *Social Development, 22*, 58-74.
- Meins, E. (1997). *Security of attachment and the social development of cognition*. Hove: Lawrence Erlbaum Associates.
- Meins, E. (1998). The effects of security of attachment and maternal attribution of meaning on children's linguistic acquisitional style. *Infant Behavior and Development, 21*, 237-252.
- Meins, E. (2013). Sensitive attunement to infants' internal states: Operationalizing the construct of mind-mindedness. *Attachment and Human Development, 15*, 524-544.
- Meins, E., & Fernyhough, C. (1999). Linguistic acquisitional style and mentalising development: The role of maternal mind-mindedness. *Cognitive Development, 14*, 363-380.
- Meins, E., Fernyhough, C., Arnott, B., Leekam, S. R., & de Rosnay, M. (2013). Mind-mindedness and theory of mind: Mediating roles of language and perspectival symbolic play. *Child Development, 84*, 1777-1790.
- Meins, E., Fernyhough, C., de Rosnay, M., Arnott, B., Leekam, S. R., & Turner, M. (2012). Mind-mindedness as a multidimensional construct: Appropriate and

non-attuned mind-related comments independently predict infant–mother attachment in a socially diverse sample. *Infancy*, 17, 393-415.

Meins, E., Fernyhough, C., & Harris-Waller, J. (2014). Is mind-mindedness trait-like or a quality of close relationships? Evidence from descriptions of significant others, famous people, and works of art. *Cognition*, 130, 417-427.

Meins, E., Fernyhough, C., Johnson, F., & Lidstone, J. (2006). Mind-mindedness in children: Individual differences in internal-state talk in middle childhood. *British Journal of Developmental Psychology*, 24, 181-196.

Meins, E., Fernyhough, C., Wainwright, R., Clark-Carter, D., Das Gupta, M., Fradley, E., & Tuckey, M. (2003). Pathways to understanding mind: Construct validity and predictive validity of maternal mind-mindedness. *Child Development*, 74, 1194-1211.

Meins, E., Fernyhough, C., Wainwright, R., Das Gupta, M., Fradley, E., & Tuckey, M. (2002). Maternal mind-mindedness and attachment security as predictors of theory of mind understanding. *Child Development*, 73, 1715-1726.

Meins, E., Fernyhough, C., Fradley, E., & Tuckey, M. (2001). Rethinking maternal sensitivity: Mothers' comments on infants' mental processes predict security of attachment at 12 months. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 42, 637-648.

Meins, E., Fernyhough, C., Russell, J., & Clark-Carter, D. (1998). Security of attachment as a predictor of symbolic and mentalising abilities: A longitudinal study. *Social Development*, 7, 1-24.

Meins, E., Harris-Waller, J., & Lloyd, A. (2008). Understanding alexithymia: Associations with peer attachment style and mind-mindedness. *Personality and Individual Differences*, 45, 146-152.

- Meins, E., Muñoz-Centifanti, L. C., Fernyhough, C., & Fishburn, S. (2013). Maternal mind-mindedness and children's behavioral difficulties: Mitigating the impact of low socioeconomic status. *Journal of Abnormal Child Psychology, 41*, 543-553.
- Osório, A., Martins, C., Meins, E., Costa Martins, E., & Soares, I. (in press). Child and mother mental-state talk in shared pretence as predictors of children's social symbolic play abilities at age 3. *Infant Behavior and Development*.
- Pawlby, S., Fernyhough, C., Meins, E., Pariante, C. M., Seneviratne, G., & Bentall, R. P. (2010). Mind-mindedness and maternal responsiveness in infant–mother interaction in mothers with severe mental illness. *Psychological Medicine, 40*, 1861-1869.