

end of the first year of life, have concepts or “understandings” of the mental lives of others.)

The direction in which C&L move on this one, is to stress the activities within which human interaction is embedded, adopting what they call “a relational, action-based perspective” within which communicative interaction also plays an essential role. Yes, but what is the grounding for communication? When the authors state that “Children’s social knowledge is based on action” (sect. 3, para. 4), they are in danger of losing the plot. The crux is how infants *experience* the activities and attitudes of self and other in interpersonal relations, not merely how they act or interact with others. C&L refer to the embodied nature of human exchanges, but they do little to explain how infants are aware of persons as having a mental as well as physical dimension, and how the nature of this awareness is such as to allow for the partitioning into what belongs to the other and what to the self over successive phases of development. What we need to explain, after all, is how a child comes to understand persons as centres of individual experience, not merely as centres of causality, and how the child’s concepts about the different facets of subjective orientation towards the world (intentions, feelings, wishes, beliefs, and so on) develop in the early years of life. Alongside this, we need to account for the forms of reflection and thinking about people – oneself as well as others – that such concepts entail.

I think the solution to the conundrum is that humans are equipped with a propensity for forms of role-taking that both link an individual infant or child or adult with someone else, and at the same time register the distinctiveness of self and other. At first such role-taking is cognitively unelaborated, not yet amounting to understanding: It takes place without pre-existing thought and in a manner that is heavily imbued with emotion. From early in life, children are moved by the attitudes of others: They are drawn to identify with the psychological stance of a person with whom they engage. It is through this mechanism that mutual relations with others vis-à-vis a shared world yield the ability to relate to one’s own mental relations, and with this, creates a kind of mental space within which new forms of thinking are possible. A prime example of how individuals interiorize the social, Vygotsky-style.

There is another sense in which this approach is more radical than that of C&L. These authors give weight to the influence of mother-child as well as peer relations in the ability to acquire and apply concepts of mind. Here the active ingredients of development are conceptualised in terms of cooperative social interaction and exposure to talk about mental states. No doubt these things are important. Beyond this, however, powerful socio-emotional forces are at play.

Especially when you are in the heat of relating to others, it can be an emotionally taxing business to think flexibly and to deploy mental concepts effectively. Critically important for the early development of this capacity are young children’s relations with at least one other person who is able to tune into their minds. The developmental influences are not merely intellectual, they are also emotional. Studies in developmental psychopathology reveal that in order to employ mind-related thinking effectively, one needs to do more than construct understanding. To maintain a reflective stance towards one’s own and others’ minds, one also needs to be in appropriate forms of relation with oneself and others. Emotional relatedness towards persons-as-represented in the mind is a vital force in intrapsychic as well as interpersonal functioning, and such relatedness and representation are powerfully influenced by identification with the attitudes of others.

The sources of mentalistic understanding involve much more than action, even co-action with others.

The sibling relationship as a context for the development of social understanding

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Abstract: Carpendale & Lewis (C&L) provide a convincing argument for how children construct social understanding through social interaction. Certainly mothers are important in family interaction; however, sibling interaction may also be key in the process of developing social understanding. In particular, the highly affective and reciprocal dynamics of the sibling relationship in both positive and conflictual interaction may be critical.

Jeremy Carpendale and Charlie Lewis (C&L) have provided an insightful and thoughtful discussion of the development of children’s social understanding. To quote these authors, “What benefits can be gained by adopting a constructivist approach to the development of children’s social understanding?” (target article, sect. 5). To my mind, there are many. First, as they indicate in their review of the theory of mind (TOM) literature, the focus on the False Belief Task has become very narrow and convoluted in its perspective. Indeed, this literature suffers from the “neurotic task fixation” syndrome that the authors outline. Lab studies can inform us only to a certain degree about children’s development and they frequently suffer from overcontrol, a nondevelopmental perspective, and fail to consider the importance of the familial context. Ultimately, such a path may doom the field to a slow and painful death; the history of psychology is littered with many such examples.

However, C&L provide an escape from this depressing scenario. Humans are social, and therefore to study TOM or, as I prefer, social understanding, within the context of relationships seems ultimately a more satisfying, and theoretically compelling and constructive, approach. By placing children’s development within the context of social relationships, the authors provide a framework for their constructivist view of social understanding. As they argue, there is a long tradition of constructivist ideas regarding children’s development. Indeed, in the field of early childhood education, this approach has long acquired popularity. The notion that “understanding comes through action” has been a fixture of early-years programs for many decades and is one of the basic premises of currently fashionable constructivist programs such as Reggio Emilio’s.

Thus, I am in basic agreement with C&L’s premises, but some important points should be emphasized more strongly. Clearly, it is not the quantity but the quality and nature of children’s close relationships that are important for social understanding. For more than 20 years, Judy Dunn’s work (see Dunn 2002) has suggested that the quality of young children’s relationships is related to their social understanding. She has been a leader in reminding us that children’s social worlds involve more than just parents and that children spend considerable amounts of time with other youngsters, especially siblings, but also peers. The field of child psychology has suffered from a focus on the mother-child relationship, and, to some degree, C&L fall into this trap. One of their arguments is that triadic interactions are key to the development of social understanding. Certainly mothers are important (we know very little about fathers in relation to social understanding), but the power of the dyadic sibling relationship should not be overlooked once again. Dunn (2002) emphasizes that particular relationships are important, namely those in which children have a vested interest and which are colored by intense affective dimensions, because these elements may provide the motivation for making one’s points understood. The reciprocal nature of the sibling relationship, as opposed to the more complementary or hierarchical parent-child relationship, affords children many opportunities to develop their social understanding in the context of ongoing interaction.

C&L have identified cooperative parent-child relationships as

key because they allow for free communication, which should facilitate understanding others' minds. Yet, the nature of complementary relationships by definition places certain constraints on freedom of communication that are not as present in more reciprocal relationships with siblings and peers (Hinde 1979). Furthermore, the authors give little attention to the role of social conflict as another possible context in which children develop social understanding, yet there is a literature providing support for this view (Dunn 2002; Howe et al. 2002; Shantz & Hartup 1992). In particular, the work that has focused on constructive versus destructive conflicts holds important promise here. In the context of constructive conflict resolution, children must demonstrate the ability to negotiate and resolve disagreements in ways that demonstrate their understanding of the partner's position, often marked by their use of mental state language. Another area that has potential to add to the strength of C&L's argument is the literature on shared meanings in pretend play. Again, when children have a vested interest in constructing a dynamic play scenario, they must extend and build onto each other's ideas in ways that indicate that they have developed a joint understanding of one another's minds (e.g., Göncü 1993; Lillard 2002). In sum, siblings are frequent partners in this process because, as any parent knows, who is there better to play with and fight with than your sibling?!

Although I have followed the TOM literature for a long time, partly because it has been the fashion leader of social cognition and promised to address some important issues, ultimately it is a narrow literature. I have often wondered what the cognitive shift at age four, as identified through the false belief task, had to do with the real world of children. It took me a long time to make the conceptual connections between TOM and the social-understanding work of Judy Dunn and others. Dunn's work has clearly shown that the development of social understanding is fascinating when we examine children in their real-world context as they (1) make meaningful and practical decisions about advancing their points of view convincingly, and (2) negotiate their way through the complex and rich world of social interactions. Moreover, the development of individual differences in children's social understanding is clearly a fruitful area of future work. For children (and researchers) there is a wealth of fascinating questions and problems to address in figuring out how the social world works and how to understand the depth, breadth, and meaning of one's social relationships. This is a developmental process that probably takes a lifetime, but certainly extends past the age of five. If C&L have pushed the social cognition field to recognize and address this point, then they will have made a major contribution to the literature.

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Emotions and emotion cognition contribute to the construction and understanding of mind

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Abstract: Carpendale & Lewis's (C&L's) interesting and insightful article did not integrate several potentially useful notions from emotion theory and research into their explanatory framework. I propose that emotions are indigenous elements of mind and that children's understanding of them is fundamental to their understanding of the mental life of self and others, understandings critical to the development of social and emotional competence.

At several points in their insightful article, Carpendale & Lewis (C&L) allude to the role of emotions in the construction and understanding of mind. Yet, they typically move on to a discussion of cognitive or social cognitive processes without really integrating any aspect of emotion theory into their conceptual framework. For example, they acknowledge the usefulness of Hobson's (2002) emphasis on the infant's emotional engagement in social interactions. Then, without further reference to the role of emotion, they immediately make the point that the infant's ability to engage in joint attention depends on her understanding of causality. A consideration of the role of emotions in developing such understanding and in constructing and understanding mind might broaden and strengthen their position. Some researchers have shown that people make important decisions, especially in risky situations, largely on the basis of emotion feelings. Such feeling-determined decisions may come after careful cognitive analysis of the consequences (Loewenstein et al. 2001). Others now maintain that brain systems involved in emotions become active when subjects perform tasks related to research on theory of mind (Zimmer 2003).

Thus, both theory and research suggest the possibility of enriching and expanding the authors' attractive concept of the epistemic triangle to create an emotion-cognition triangle. An emotion-cognition account of the construction and understanding of mind would emphasize three principles: (1) emotion feelings are dynamic indigenous components of mind that influence perception and cognition; (2) emotion cognition can shape the world as interesting, friendly, and cooperative, or as stressful, hostile, and competitive; and (3) emotion-related action will emerge as constructive or destructive behavior depending on the effectiveness of arousal regulation, the quality of the thought in emotion-cognition interactions, and the effectiveness with which one modulates the expressions of emotions in words and deeds.

Most of the evidence for the existence of emotion feelings as indigenous components of mind comes from studies of infants' abilities to perceive the facial and vocal expressions of others and to encode their own. Beginning as early as age three or four months, infants discriminate between the facial and vocal expressions of several basic emotions. They respond to them, as well as to different environmental conditions, in ways that suggest they can meaningfully decode external emotion signals and respond sensibly to their own internal signals (Haviland & Lelwica 1987; Izard et al. 1995; Sullivan & Lewis 2003; Sullivan et al. 1992; Weinberg & Tronick 1994). If one accepts these findings as evidence that feelings are natural elements of mind, two things follow. First, as part of the processes involved in the construction of mind, the infant can learn various associations or connections between feelings, expressions, and contingent events (e.g., caregiver actions in response to infant's expressions of feelings). Second, an important part of the sense of self as causal agent can emerge from sensing the contingency of emotion feelings (and expressions) and the changes they induce in the social environment (Tronick et al. 1977; Izard 1978; Malatesta et al. 1989). The processes underlying these developments could surely play a significant part in the construction and understanding of mind. If emotions are indigenous elements of mind, then understanding emotions is tantamount to understanding parts of mind, arguably the parts that drive the workings of the other parts (Izard 2001; Tomkins 1962).

Emotion cognition affects the construction and understanding of mind both in terms of its content and via ongoing information processing. It has two major aspects: (1) understanding or knowledge of emotion feelings, expressions, and functions; and (2) the feeling-influenced information processing mechanisms involved in perception and thought. Emotion knowledge and emotion information processing may play major roles in the development of processes often identified as aspects of theory of mind (Zimmer 2003).

Emotion cognition may have particular consequences for the development of social and emotional competence and the self-concept. Emotion knowledge (EK) relates positively to social