Cognitive Pragmatics

Edited by
Hans-Jörg Schmid

De Gruyter Mouton

2012

10. Components of pragmatic ability and children's pragmatic language development

Daniela K. O'Neill

1. Introduction

Differing definitions and the lack of a coherent theory of pragmatics have led to differing views of what abilities and topics of study reside within its domain, and also what kinds of knowledge are implicated. At a purely academic level it may not be urgent to resolve these differences, but from the viewpoint of a child who may be encountering difficulties with the acquisition of pragmatics, the lack of agreement as to which abilities to consider as pragmatic has made assessment more difficult and time-consuming (Gallagher 1991a) and resulted in a deplorably small number of standardized measures to assess pragmatics (but see O'Neill 2007, 2009). Furthermore, a fuller and more precise conception of what kinds of knowledge underlie different pragmatic abilities has important implications for directing intervention when faced with a child experiencing delay or impairment in pragmatic development. This chapter will present an overview of a number of different types of pragmatic abilities acquired in early and later childhood within the context of three domains of knowledge that are discussed in both the child language research and child clinical literature as underlying pragmatic ability, namely, social, social-cognitive, and cognitive knowledge.

The literature on pragmatics is vast, even if limited only to children's acquisition. Just as there are numerous definitions of pragmatics and lists of pragmatic phenomena, the lists are even longer when considering the types of knowledge suggested as underlying these phenomena. These underlying knowledge bases are also discussed in many different ways. Some accounts identify several main types of knowledge for communicative competence. Gallagher (1991a), for example, identifies language structural knowledge, presuppositional knowledge, and conversational knowledge as three types of knowledge required for communicative competence. Other accounts are more process-oriented. For instance, Verscheuren (1999) argues that language use involves the continuous making of choices and defines adaptability as a key notion to explain, for example, how speakers choose among the ingredients of the communicative context (e.g., physical surroundings, social relationships, states of mind) influencing linguistic choices. At present, I would argue, however, that the literature, especially with respect to children, offers little in the way of a comprehensive framework for considering the acquisition of pragmatics or the large number of different abilities subsumed under the general term pragmatics, and how these skills may or may not be related to other types of knowledge a child is acquiring.

2.   Approaches to pragmatics

The complex domain of pragmatics has naturally led to different models and approaches in the literature. Among early influential models, Bloom and Lahey's (1978) depicts language as the intersection between the three domains of content rules, form rules, and use rules. Prutting's model (1982) introduced and emphasized the dyad as the minimal unit of analysis and depicted, in a venn style diagram, three areas of knowledge – social and cognitive knowledge, linguistic rules, and pragmatic rules – "that operate together in the flow of discourse" (Prutting 1982: 130). From the beginning, early definitions and pragmatic language models acknowledged the social nature of language (Austin 1962; Bates 1976; Bloom and Lahey 1978; Bruner 1975; Searle 1969) as captured in this statement by Gallagher (1991b: 11–12): "when [the] language code is used to communicate, it is an inherently social phenomenon. Pragmatics is the study of language as it is used and when language is used in conversation it is a social behavior". With a specific focus on children's development, several approaches have aimed to abandon a view of pragmatics as simply an inventory of abilities and sought a broader interpretation in which pragmatics is viewed as a more dynamic influence on language acquisition (Rees 1982; Tomasello 1992; Wetherby 1991). Functionalist models have placed at the forefront an emphasis on what children are trying to communicate in naturalistic settings rather than maintaining a strict distinction between language form, meaning, and use (cf. Bates 1976; Bates and MacWhinney 1982; Nelson 1981; Prutting 1982; Ninio and Snow 1996; Perkins 2007; Verscheuren 1999).

Prominent among authors who consider pragmatics from a clinical or neuropsychological standpoint is the viewpoint that pragmatics quickly extends beyond the realm of language structure and linguistics, and involves knowledge that is more aptly viewed as social, cultural, cognitive, or even sensorimoter (Adams 2005; Fujiki and Brinton 2009; Ninio and Snow 1996; Perkins 2007). Fujiki and Brinton (2009), for example, build on the functionalist position and advocate for an expanded view of pragmatics in a wider context of social communication that allows a wider range of interactive behaviours to be considered as part of pragmatics and intervention (e.g., behaviours leading to successful peer group entry). Newer emergentist and neuropsychological/neurolinguistic approaches, such as that of Perkins (2007, 2009), build on earlier interactionist approaches and seek to abandon a generic view of pragmatic impairment in favour of providing a taxonomy of pragmatic impairments (e.g., cognitive, linguistic, non-verbal, sensorimoter) based on differences in component abilities underlying these deficits (e.g., impaired lexical access versus theory of mind). The latter clearly aim not just to describe pragmatic impairment, but to explain it in a way that provides clinicians with clear targets for intervention (cf. Perkins 2007).

With this landscape in mind, I would like to propose a framework in which the domain of pragmatics, as shown in Figure 1, is comprised of three core compo-

nents, namely, *social pragmatics*, *mindful pragmatics*, and *cognitive pragmatics*, which draw, respectively, on knowledge that is social, social-cognitive or cognitive in nature.

Two caveats should be noted with respect to Figure 1. First, this depiction of the domain of pragmatics should not be interpreted as implying static knowledge. Rather, the highlighted domain of pragmatics is where these three types of knowledge *come to be used in conversation or dialogue*. In other words, these three components constitute pragmatic competence and the active, ongoing, dynamic event of communicating with others. One may be best able to think of this in the context of multiple iterations of Figure 1, each representing one person present in a communicative interaction. Another way to describe this is that social, social-cognitive and cognitive knowledge are used in other settings and for other purposes that have nothing to do with pragmatics and dialogue or conversation. Thus, the highlighted oval represents when these domains of knowledge are used specifically in conversation or dialogue in an active, ongoing manner. Indeed, a picture of three children in conversation serves as a reminder of this in Figure 1.

The second caveat is that Figure 1 is also meant to convey that not all social, social-cognitive or cognitive knowledge will be relevant to pragmatics. Rather, I will define pragmatics at present as the utilization of social, social-cognitive or cogni-
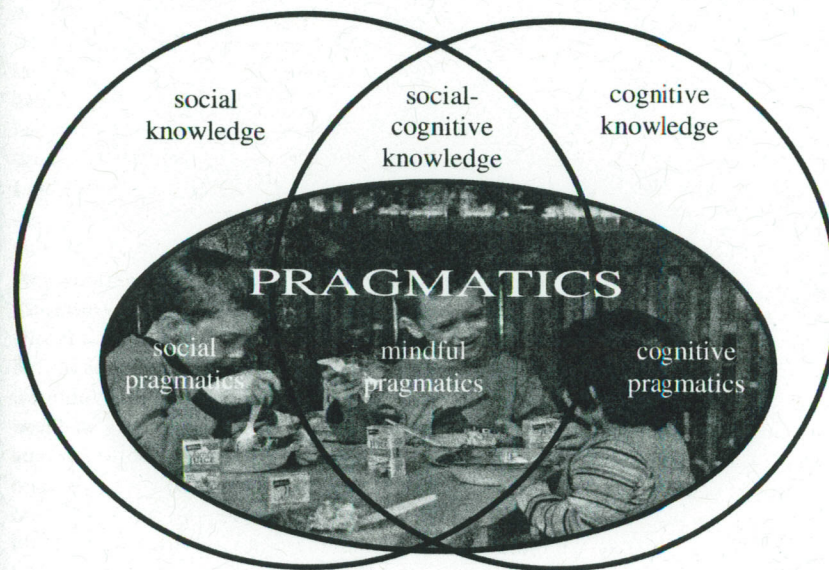

Figure 1.   Three components of the domain of pragmatics drawing on social, social-cognitive and cognitive knowledge respectively

tive knowledge in interaction with others *that is specifically related to how individuals or groups may possess differing experiential or conceptual mental perspectives and expectations* that must be taken into account in order to communicate or understand another communication effectively. This definition is meant to capture, as will be discussed in more detail in this chapter, that an interlocuter must take into account that the social, social-cognitive or cognitive perspectives or points of view of conversational interactants may differ. This approach can be viewed as similar to other approaches, albeit these are usually discussed with respect to just one of these types of knowledge separately. For example, with respect to cognitive knowledge, Sperber and Wilson's relevance theory emphasizes participants' shared "cognitive environments" (Sperber and Wilson 1986/1995). Here I have attempted to be more inclusive with respect to different types of knowledge that children may be utilizing to assess the potentially differing experiential, conceptual mental perspectives and expectations of communicative interactants. Space constraints, and the goal of this chapter to provide an overview of pragmatic development in childhood, do not permit a detailed discussion of this approach in relation to other preceding approaches and models. The discussion to follow will proceed directly to considering the three different types of knowledge represented in Figure 1 and their relation to pragmatic competence. In discussing each of these types of knowledge, findings from the literature on children's acquisition of pragmatics will be incorporated both to illustrate examples of the different domains of pragmatic competence and to show how these domains can capture age differences in types of pragmatic competencies acquired. The particular developmental acquisitions highlighted are meant to underscore the compatibility of this approach with functionalist approaches that stress that development may be propelled by what children "suppose language to be useful for" (Nelson 1981: 186). Or as Ervin-Tripp and Mitchell-Kernan have said, "work on children's discourse pushes back to the earliest stages of interaction" and can enable us "to find through comparative studies those facets of human interaction which are fundamental and universal" (1977a: 23).

It should be noted that several authors have produced excellent, detailed overviews of the acquisition of pragmatic abilities in childhood. The reader is referred, in particular, to the works of Foster (1990), McTear and Conti-Ramsden (1992), Hoff-Ginsburg (1996), Nino and Snow (1996) and Clark (2009). The focus of this chapter is not to reproduce these (cf. Reboul, Manificat and Foudon, this volume), but rather to try to seek a coherent means whereby to classify a variety of these acquisitions (rather than an exhaustive set) as one type of pragmatic ability versus another by considering the knowledge potentially being recruited by a language user as suggested by empirical studies in the literature. One outcome of this may be greater clarity with respect to grouping certain pragmatic abilities as similar or different. A second outcome may be a reconsideration of some abilities that are commonly treated as pragmatic, but may be more appropriately regarded as residing outside the domain of pragmatics.

Throughout this discussion, non-verbal means of communication such as eye gaze, facial expressions, and gesture are meant to be included and viewed as simply alternative means by which persons can convey information in lieu of speech (either alone or in conjunction with speech to express similar or additional information). And just as with spoken speech, the pragmatic use of gestures can recruit different types of knowledge. For example, a gesture to indicate that you would like to pay in a restaurant might recruit social knowledge pertaining to cultural conventions, while a gesture to indicate to a listener that you are trying to remember something on the tip of your tongue might recruit social-cognitive knowledge relevant to an understanding of mental states.

3.   Social cognitive knowledge and *mindful pragmatics*

That a child's language use is influenced by growth in social-cognitive knowledge is well recognized (e.g., Bates et al. 1979; Faerch and Kasper 1984; Schiefelbusch and Pickar 1984; Smith and Leinonen 1992; Ninio and Snow 1996; O'Neill 1996, 2007; Thompson 1996; Verschueren 1999; Abbeduto and Short-Meyerson 2002; Tomasello, 2003) and reflected in communicative competence model approaches (Gumperz and Hymes 1964; Hymes 1972) and approaches that view language use and pragmatics as social competence (Prutting 1982). The interplay between social-cognitive knowledge and language use has been the topic of much research activity, especially with respect to one particular area of social-cognitive knowledge, namely, children's developing understanding of mind. Increasingly, this research has focused on very young children, including infants. I will begin this overview of children's acquisition of pragmatic competence with respect to social cognitive-knowledge and mindful pragmatics.

Children's developing understanding of the mind can be defined as their understanding of their own and other people's behaviours, mental states, and differing perspectives (i.e., *theory of mind*; cf. Astington, Harris, and Olson 1988). Viewing pragmatic competence as recruiting an understanding of mind is a relatively new approach, but similar to approaches that have viewed pragmatics as encompassing "the study of understanding intentional human action" (Green 1989: 2) and reflecting "the achievement of understanding the interlocutor's state of mind" (Ninio and Snow 1996: 191). Note, however, that an understanding of mind should be equated neither with social cognition nor pragmatics. Social cognition is a broader construct that has been defined as "the way individuals perceive, interact with, and organize knowledge about people" (Sherrod and Lamb 1981) and includes topics such as stereotype knowledge or relationship knowledge that would generally be considered to lie outside of the domain of theory of mind. The term *mindful pragmatics* is used to capture pragmatic competence reliant on *an understanding of differing conceptual mental perspectives and expectations as they apply at a*

tive knowledge in interaction with others *that is specifically related to how individuals or groups may possess differing experiential or conceptual mental perspectives and expectations* that must be taken into account in order to communicate or understand another communication effectively. This definition is meant to capture, as will be discussed in more detail in this chapter, that an interlocuter must take into account that the social, social-cognitive or cognitive perspectives or points of view of conversational interactants may differ. This approach can be viewed as similar to other approaches, albeit these are usually discussed with respect to just one of these types of knowledge separately. For example, with respect to cognitive knowledge, Sperber and Wilson's relevance theory emphasizes participants' shared "cognitive environments" (Sperber and Wilson 1986/1995). Here I have attempted to be more inclusive with respect to different types of knowledge that children may be utilizing to assess the potentially differing experiential, conceptual mental perspectives and expectations of communicative interactants. Space constraints, and the goal of this chapter to provide an overview of pragmatic development in childhood, do not permit a detailed discussion of this approach in relation to other preceding approaches and models. The discussion to follow will proceed directly to considering the three different types of knowledge represented in Figure 1 and their relation to pragmatic competence. In discussing each of these types of knowledge, findings from the literature on children's acquisition of pragmatics will be incorporated both to illustrate examples of the different domains of pragmatic competence and to show how these domains can capture age differences in types of pragmatic competencies acquired. The particular developmental acquisitions highlighted are meant to underscore the compatibility of this approach with functionalist approaches that stress that development may be propelled by what children "suppose language to be useful for" (Nelson 1981: 186). Or as Ervin-Tripp and Mitchell-Kernan have said, "work on children's discourse pushes back to the earliest stages of interaction" and can enable us "to find through comparative studies those facets of human interaction which are fundamental and universal" (1977a: 23).

It should be noted that several authors have produced excellent, detailed overviews of the acquisition of pragmatic abilities in childhood. The reader is referred, in particular, to the works of Foster (1990), McTear and Conti-Ramsden (1992), Hoff-Ginsburg (1996), Nino and Snow (1996) and Clark (2009). The focus of this chapter is not to reproduce these (cf. Reboul, Manificat and Foudon, this volume), but rather to try to seek a coherent means whereby to classify a variety of these acquisitions (rather than an exhaustive set) as one type of pragmatic ability versus another by considering the knowledge potentially being recruited by a language user as suggested by empirical studies in the literature. One outcome of this may be greater clarity with respect to grouping certain pragmatic abilities as similar or different. A second outcome may be a reconsideration of some abilities that are commonly treated as pragmatic, but may be more appropriately regarded as residing outside the domain of pragmatics.

Throughout this discussion, non-verbal means of communication such as eye gaze, facial expressions, and gesture are meant to be included and viewed as simply alternative means by which persons can convey information in lieu of speech (either alone or in conjunction with speech to express similar or additional information). And just as with spoken speech, the pragmatic use of gestures can recruit different types of knowledge. For example, a gesture to indicate that you would like to pay in a restaurant might recruit social knowledge pertaining to cultural conventions, while a gesture to indicate to a listener that you are trying to remember something on the tip of your tongue might recruit social-cognitive knowledge relevant to an understanding of mental states.

3.   Social cognitive knowledge and *mindful pragmatics*

That a child's language use is influenced by growth in social-cognitive knowledge is well recognized (e.g., Bates et al. 1979; Faerch and Kasper 1984; Schiefelbusch and Pickar 1984; Smith and Leinonen 1992; Ninio and Snow 1996; O'Neill 1996, 2007; Thompson 1996; Verschueren 1999; Abbeduto and Short-Meyerson 2002; Tomasello, 2003) and reflected in communicative competence model approaches (Gumperz and Hymes 1964; Hymes 1972) and approaches that view language use and pragmatics as social competence (Prutting 1982). The interplay between social-cognitive knowledge and language use has been the topic of much research activity, especially with respect to one particular area of social-cognitive knowledge, namely, children's developing understanding of mind. Increasingly, this research has focused on very young children, including infants. I will begin this overview of children's acquisition of pragmatic competence with respect to social cognitive-knowledge and mindful pragmatics.

Children's developing understanding of the mind can be defined as their understanding of their own and other people's behaviours, mental states, and differing perspectives (i.e., *theory of mind*; cf. Astington, Harris, and Olson 1988). Viewing pragmatic competence as recruiting an understanding of mind is a relatively new approach, but similar to approaches that have viewed pragmatics as encompassing "the study of understanding intentional human action" (Green 1989: 2) and reflecting "the achievement of understanding the interlocutor's state of mind" (Ninio and Snow 1996: 191). Note, however, that an understanding of mind should be equated neither with social cognition nor pragmatics. Social cognition is a broader construct that has been defined as "the way individuals perceive, interact with, and organize knowledge about people" (Sherrod and Lamb 1981) and includes topics such as stereotype knowledge or relationship knowledge that would generally be considered to lie outside of the domain of theory of mind. The term *mindful pragmatics* is used to capture pragmatic competence reliant on *an understanding of differing conceptual mental perspectives and expectations as they apply at a*

more individual or personal level with respect to interactants in a dialogue or conversation (to be contrasted with a more general, conventional-level understanding when considering cognitive pragmatics).

This understanding will encompass a wide range of abilities, progressing from the earliest understandings in infancy of joint attention and intentions to communicate via gestures and single words to the developing understanding during the toddler and preschool years of other people as beings with desires, wants, expectations, emotions with whom you can communicate to regulate their actions, request or share information and with whom you may have to adapt your communication to accommodate different perspectives, beliefs and knowledge (for comprehensive overviews of these early developments in understanding of mind see, e.g., Dunn 1988; Perner 1991; Astington 1993; Shatz 1994; Bartsch and Wellman 1995; Carpendale and Lewis 2006). Beyond the preschool years, this understanding will incorporate more sophisticated concepts such as mixed emotions, second- and third-order false beliefs, and an understanding of deception and irony (Perner and Wimmer 1985; Chandler, Fritz, and Hala 1989; Pons, Harris, and de Rosney 2004; Fillipova and Astington 2008).

Already at 9 to 10 months of age, children use their gestures and vocalizations to request, label, answer, greet and protest (Bates, Camaioni, and Volterra 1975; Dale 1980). With respect to children's understanding of mind, it has been realized, largely via work with children with autism spectrum disorders, that the distinction between gestures used to request something (i.e., protoimperatives) and gestures used to share an attentional focus of interest such as showing or pointing at an object or event of interest (i.e., protodeclaratives) is critical. A lack of progression from imperative to declarative pointing is now well-recognized as an important early 'red flag', potentially marking an impairment in children's developing understanding of mind and constituting an early indication that a child may be on the autism spectrum (Wetherby, Prizant, and Hutchinson 1998).

The use of non-verbal and verbal indications of a speaker's intentions has also been demonstrated in very young children, and the evidence is especially abundant for word learning (Tomasello 1988, 1999, 2003; Baldwin 1991). For example, 16-month-old infants will consult the eye gaze of an adult speaker in order to determine an intended referent in a situation in which a child is playing with an object but an adult was looking at a different object (cf. also Baldwin 1993). Indeed, Tomasello (2003: 3) has posited "intention-reading (theory of mind, broadly conceived)" to be one of two key skills (the other being pattern-finding) underlying language acquisition. Similarly, Clark (2009: 129) has argued that "the study of word acquisition should be the study of the pragmatic inferences children make about language use." By age two, children will also take account of repairs (*Uh-oh, it's not an X, it's a Y*) and utterances distinguishing intentional from unintentional actions (e.g., *Oops!*) when inferring the intended referent of a new word (Tomasello and Kruger 1992; Tomasello and Barton 1994; Clark and Grossman 1998).

Examination of children's two-word utterances (Wieman 1976) has revealed that children will place stress on what is new (versus given) in the conversational context and that their hierarchy of stress assignments is almost identical to Chafe's (1970) hierarchy of the position of new information in English utterances. Two-year-olds have also been shown to be intent on achieving understanding in addition to their expressed goal by the fact that they will repair misunderstandings regardless of whether their goal is achieved or not (Shwe and Markman 1997). Two-year-olds will also adapt their request for a toy to take into account whether their mother was present or absent when the identity and location of the toy was revealed to the child (O'Neill 1996). By three years of age, children's intrusions in conversations also become increasingly relevant and on-topic (Dunn and Shatz 1989). Three-year-olds have also demonstrated the ability to assess the expertise of speakers, as knowledgeable or ignorant for example, and to use this information in deciding whether to trust the information from a speaker. For example, three-year-olds attend more to speakers who express certainty (*This is a spoon*) than speakers who express uncertainty (*I think this is a spoon*) (Jaswal and Malone 2007, see also Koenig and Harris 2005). By four years of age, children will assess expertise even under conditions where two speakers are differentially accurate, but neither is 100% accurate (Pascquini et al. 2007). At four years of age, children also speak of desires and beliefs in a contrastive manner. That is, children will, for example, contrast one person's desires or beliefs with another person's (e.g., *The people thought Dracula was mean. But he was nice*; Bartsch and Wellman 1995: 53). Four- and five-year-olds have also been shown to explicitly question and track the knowledge possessed by a conversational partner (Short-Meyerson and Abbeduto 1997; Saylor, Baird, and Gallerani 2006; Short-Meyerson 2010). By this age, in peer-to-peer conversation in non-play settings (e.g., snacktime), children have demonstrated an ability to initiate conversations about topics related to the mental states of their conversational partners (e.g., *Did you know Pokeman has this many arms?*), even when no adults are present to help prompt or scaffold the conversation (O'Neill, Main, and Ziemski 2009).

Beyond the preschool years, humour, deceit, irony and sarcasm are among some of the pragmatic abilities viewed as relying on concurrent developments in children's understanding of the mind. It is now well recognized that children's playfulness with conventional wordings and other forms of verbal humour (McGhee 1979; Dunn 1988; Reddy 1991; Bergen 2001; Cameron, Kennedy, and Cameron 2008) begins early, as young as 18 months of age in some cases and certainly by age two. These findings suggest that as children's understanding of the beliefs and expectancies of other people develops, so too does their ability to exploit these beliefs and expectancies to produce humour (cf. Reddy 1991). Attempts to produce lengthier jokes and riddles have been commonly observed among preschool-aged children (Garvey 1977; Dunn and Kendrick 1982; Dunn 1988; O'Neill, Main, and Ziemski 2009). The link between many forms of verbal humour

and children's growing understanding of the mind is also supported by impairments in such forms of humour among individuals with autism displaying deficits in their understanding of mind (St. James and Tager-Flusberg 1994). Not all forms of verbal humour may rely on such an understanding, however. Among school-age children, appreciation of verbal jokes and riddles has been studied more often with respect to comprehension rather than production, and discussions have focused on the contribution of linguistic and cognitive developments (e.g., lexical ambiguity, phonological ambiguity), abstract reasoning ability, and factual knowledge (Nippold 1998).

The literature on the acquisition and understanding of other forms of non-literal language in children, such as indirect requests, idioms, sarcasm and irony, is relatively large and a detailed review is beyond the scope of this chapter (for review, see Nippold 1998). These non-literal language forms are often studied together, in the context of testing predictions regarding gradations of difficulty in their comprehension (Bucciarelli, Colle, and Bara 2003; Bernicot, Laval, and Chaminaud 2007). Although these predictions are based on considering the nature and difficulty of the inferences involved (e.g., " … the difficulty of the cognitive-social inference required …", Bernicot, Laval, and Chaminaud 2007: 2128), the descriptions of these inferences are actually quite different at times and it could be questioned whether treating these non-literal language forms as more of a continuum of acquisitions is appropriate. For example, Bernicot et al. (2007: 2118) describe idioms as resting on " … a linguistic convention" and implicatures requiring a sarcastic inference as " … based on linguistic cues (namely, the contradiction between the two terms) and shared knowledge" (Bernicot, Laval, and Chaminaud 2007: 2119). The acquisition of idioms was predicted to occur earlier than that of sarcasm (although this could be debated, or vary, depending on the type of linguistic convention or shared knowledge required).

In the framework of pragmatics I am presenting here, idioms would therefore appear to rely much less on social-cognitive knowledge than sarcasm. That is, although idioms require a distinction between what is said and what is meant, a listener could be viewed as largely relying on learned, memorized information (e.g., 'encyclopedic entries'; Vega-Moreno 2005) for opaque idioms (e.g., *beating around the bush*), or on more cognitive knowledge in the case of more transparent idioms (e.g., *hold your tongue*) (Gibbs 1987; Nippold 1998; cf. Bucciarelli et al. 2003 regarding conventional indirect forms). The same situation would not apply for sarcasm, however, where it is difficult to see how the appropriate meaning could be deciphered without an understanding of mind that allows a child to recognize the speaker's intended purpose with respect to him/herself and the listener in using sarcasm (i.e., to be funny by teasing the listener).

When children's acquisition of non-literal language is studied, it is also most often with respect to comprehension and not production. Children are also usually required to provide two types of responses: (1) a response (that is sometimes ac-

complished verbally or via a point gesture) that indicates they understand the discrepancy between what a speaker said and what the speaker meant (e.g., *she said the room was clean but she meant it was messy*); and (2) a verbal explanation that indicates this understanding more explicitly (e.g., the child must answer why they chose a particular meaning or, for example, why a speaker used sarcasm, for instance to tease). Some authors refer to these two dependent measures as "pragmatic skill" and "metapragmatic knowledge", respectively (e.g., Bernicot, Laval, and Chaminaud 2007). Often, quite large age differences with respect to performance on these two different dependent measures are found as well as differences in the order of acquisition of competence across different forms of non-literal language.

One development that shows consistency, however, across several studies is the acquisition of sarcasm. Sarcasm is viewed as an instance of a violation of Grice's (1975, 1989) maxim of relation (i.e., a sarcastic violation, Bernicot, Laval, and Chaminaud 2007). Evidence suggests that it is only by about 11 years of age that children achieve a full understanding of sarcasm (Bernicot, Laval, and Chaminaud 2007; Demorest et al. 1984). The fact that sarcasm requires a child to understand a speaker's purpose for using sarcasm certainly requires a more sophisticated understanding of mind. However, it is also clear that there are other factors contributing to children's understanding of sarcasm, such as the use of story context cues and intonational cues (Capelli, Nakagawa, and Madden 1990) that could be argued to rely less on social-cognitive knowledge. Irony also appears to be a similarly late-emerging communicative form (Winner 1988; Lucariello and Mindolovich 1995; Bucciarelli et al. 2003; Filippova and Astington 2008).

As a last example of non-literal language forms, I will consider the most heavily studied one – indirect speech acts. With respect to indirect speech acts and, in particular, indirect requests, somewhat uniquely, comprehension has not been the sole focus, and much production data exists as well (e.g., Bates 1976; Ervin-Tripp and Mitchell-Kernan 1977b; Ervin-Tripp et al. 1986; Ninio and Snow 1996; Ryckebusch and Marcos 2004; Bucciarelli et al. 2003; Bernicot, Laval, and Chaminaud 2007). Production and comprehension data reveal a protracted and nuanced acquisition process that begins as early as at two years of age but that also demonstrates that a full understanding is not achieved until around eight years of age, when children can provide verbal explanations and spontaneously produce polite forms quite appropriately in interaction with others (for reviews, see Foster 1990; Clark 2009). Indirect speech acts also highlight a case where social-cognitive knowledge and social-cultural knowledge are both playing important roles. Indeed, it may be more appropriate to place the acquisition of indirect requests in the domain of social pragmatics. Young children must be explicitly taught (Foster 1990) more polite forms. For example, an English-speaking child would be taught that *I want juice!* is better expressed as *I would like some juice* or *Can I have some juice?*, or that the more polite *Could you get me my shoes?* will be more effective than the direct command *Get me my shoes*. Thus, a first step for children in the ac-

quisition of polite speech is to learn the appropriate linguistic forms, which are a matter of convention and will vary from culture to culture. Children must also learn what forms are appropriate for given settings and given interlocutors who may vary in age, status or sex. And, third, they must also come to understand that polite forms are essential to "maintain[ing] the co-operative nature of language interchange" (Allan 1986: 10) and keep things equal or balanced within an exchange (Brown and Levinson 1987) (i.e., the notion of gaining, maintaining or losing face in relation to others). Cross-cultural research has confirmed that children receive explicit instruction from adults as to the use of polite forms and the reasons for doing so (Hollos and Beeman 1978; Erbaugh 1992; Nakamura 2001). For example, in a study of Japanese mother-child interactions (Clancy 1985), mothers talked about the feelings and thoughts of others, and cited such reasons as: because that is the way things are done, because someone else needs the compliance, because otherwise other people will ridicule the child. This research on parental input thus also supports the notion that the acquisition of politeness and the indirect forms involved are heavily dependent on a child taking into account the mental states of others and considering the perspectives of others. Overall, the study of indirect requests in children highlights, I believe, the importance of studying these forms in more naturalistic, non-laboratory settings in order to get a full picture of children's acquisition and use in communicative settings that may prove to be simpler or more complex and demanding than laboratory settings and tasks.

As a final note, in my own work, my interest in what children realize they can do with language as a result of their growing understanding of people and their own and other people's minds has led to the development of the *Language Use Inventory* (*LUI*, O'Neill 2007, 2009), a standardized parent-report questionnaire to assess early pragmatic language use, designed for 18- to 47-month-old children. The items on the LUI are based on the view that a large portion of children's early language use is driven by their growing social cognitive competence, their interest in people, minds, and perspectives, and a desire to communicate about these things with people. And indeed the developmental growth trends and data from the standardization study of the LUI (O'Neill 2009) support the existence of consistency in the acquisition of such forms of talk across children during the period from 18 to 47 months of age.

4.   Cognitive knowledge and *cognitive pragmatics*

What developing pragmatic abilities might constitute examples of cognitive pragmatics? I would like to propose that situations in which a communicator is taking into account the minds of other interactants in a very individual, subjective manner (e.g., what he/she wants, desires, intends, knows about x in the current situation) be distinguished from situations in which a communicator is taking into account *cog-*

nitive stances that apply more generally across situations and across different interactants (e.g., inferences regarding what is conventional or relevant). The former would represent social-cognitive mindful pragmatics, whereas the latter would represent instances of cognitive pragmatics. Thus pertinent to developmental cognitive pragmatics is the fact that children are not learning to use language with just the one mind of a communicative partner in mind, but with other *minds* in mind. In interaction and conversation, children are learning what other minds also find salient, relevant or interesting to talk about.

To illustrate, consider the findings of a study in which typically developing 22-month-old children, at only the one- and two-word stage, were given a series of toys that featured notable changes in their identities or properties, such as a change in size or weight (O'Neill and Happé 2000). Children directed their attention in a remarkably similar way to these different changes in the toys, vocalized at very similar times about these changes, and noted these differences via showing gestures and in their talk (e.g., *big duck*; *heavy*) in a very similar way. How should one explain the fact that by 22 months of age children appear to already possess and demonstrate a common understanding of what is noteworthy to share and talk about? Perhaps, as some authors have argued, infants "learn where to attend" (Donald 2001: 228) and this is achieved by parents and family "train[ing] infants to share attention with them" (Donald 2001: 205). In O'Neill (2005), I speculated that perhaps children learn 'what to talk about' by noting such cues as another person's line of regard, referential gestures, or actions with objects. It is worth keeping in mind that this ability that appears to come so naturally to 22-month-old typically developing children does not come so easily to other children. For example, in our study (O'Neill and Happé 2000) the same consistency in behaviours and vocalizations was not observed among a group of children with autism. Indeed, a profound difficulty in acquiring and making use of conventional knowledge has been argued to underlie the social deficits in autism (Bruner and Feldman 1993; Capps, Kehres, and Sigman 1998).

Some readers may find the pragmatic ability just described to nevertheless be better housed within the domain of mindful pragmatics than cognitive pragmatics, so I will provide another possible illustration of cognitive pragmatics from early word learning. Clark (1987, 1990, 1993) has argued that children's inferences about the meanings of new terms can be explained via their reliance on two pragmatic principles, namely, conventionality and contrast. Conventionality is defined as "for certain meanings, speakers assume that there is a conventional form that should be used in the language community" (Clark 2009: 143). Thus speakers will give priority to conventional forms. The principle of contrast is defined as "[s]peakers assume that any difference in form signals a difference in meaning" (Clark 2009: 144). Thus, if a speaker does not use a conventional term (e.g., uses *hare* instead of *bunny*), their addressee would assume they are trying to express some other meaning than that captured by the conventional term. That is, a child

will interpret a speaker's use of a different word as signalling a difference in meaning (for review, see Clark 1993, 1995). The use of these principles has been described by Clark (2009: 128) as " ... making use of pragmatically licenced inferences" and is an alternative to the proposed use of a priori constraints on children's hypotheses about word meanings (e.g., Mervis 1987; Markman 1989).

I would also propose that children's developing ability to use deictic terms correctly falls within the domain of cognitive pragmatics given that the perspective-dependent, point-of-view information that must be taken into account is not specific to individual persons, but rather to their conversational roles, locations and times when the utterance is spoken. For example, given that the pronouns *I* and *you* shift referent with every change in speaker, determining who is in the role of speaker and listener at the time of the utterance governs the use of *I* and *you*, independent of who the speaker or listener is. It takes until about three to four years of age for children to acquire the deictic meanings of *I* and *you* and *here* and *there*, and even longer to acquire the deictic pairs *this* and *that* and *come* and *go* (Girouard, Ricard, and Decarie 1977; Clark 1978, 1990). Before this age, children's errors reflect a tendency to use themselves, rather than the speaker, as the reference point and so, for example, *here* is used with the meaning 'near me' rather than near the speaker (Clark and Garnica 1974; Clark and Sengul 1978). Interestingly, recent studies have utilized children's comprehension and production of deictic terms within a narrative to infer the use of situation models in narrative comprehension (e.g., Rall and Harris 2000). How situation models may play a role in the acquisition of deixis has not yet been examined.

The potential importance of considering that different types of knowledge may underlie different pragmatic abilities is perhaps most evident when considering narrative ability and its development. Narrative ability is always included in lists and overviews of children's acquisition of pragmatics. But narrative ability is not always recognized for the many different kinds of methodologies and dependent measures it encompasses, as well as very different kinds of understandings and abilities (O'Neill, Pearce, and Pick 2004). For example, a child's ability to adopt and use the "voices" of characters in a narrative (e.g., O'Neill and Holmes 2002) and the ability of preschoolers to "step into the shoes and minds" of story characters (Fecica and O'Neill 2010) appears reliant on social-cognitive knowledge and to fall within the realm of mindful pragmatics. However, social knowledge could be viewed as underlying the ability of children to produce narratives that are considered "good" narratives by teachers once children enter school, given that children must adopt a format that is valued in school but not necessarily compatible with the narrative style valued by their family or culture (Heath 1983; Gee 2004).

What might be a representative narrative ability housed within cognitive pragmatics? The ability to produce clear referents within a story may be one such ability. The main consequence of an inability to establish clear referents is judged to be

difficulty on the part of a listener or listeners to comprehend a child's story. In one such study (O'Neill & Holmes 2002), four-year-olds were found to produce clear referents when narrating the picture storybook "Frog goes to Dinner" about 50% of the time. Interestingly, three-year-olds were also able to produce clear referents an equivalent proportion of the time, but only if their pointing gestures and use of voicing was considered in addition to their ability to produce a clear referent verbally. If only verbal instances of clear referencing were considered, then three-year-olds' proportion of clear referents stood only at 13%. Interestingly, though, studies of children's referencing ability cannot discern whether referencing is being impacted or not by the presence of an audience. In many studies, the child must narrate a story back to an experimenter known to the child to already know the story, thus obscuring somewhat the motivation for clarity on the part of the child. Clear evidence does not exist as to whether narratives produced for the self display different (i.e., lower) levels of cohesion or referential adequacy than narratives produced when an audience is present. It seems plausible that if one considers narrative cognition to be a fundamental form of human cognition and, as Bruner (1990, 1991) has argued, the means by which humans make sense of and understand the world around them, then the creation of a coherent and clear narrative may be the intended aim of all human minds, *for themselves* primarily (see also Fecica and O'Neill 2010). Thus, it may be more appropriate to view anaphora as an outcome of how the human mind attempts to deal with longer instances of communication describing events and interactants (text, discourse, conversational stories) and for which the audience can be other people or the self. Anaphora would be independent of whether the individual is physically interacting communicatively with others (but see Levy 2003). One might conclude then that, as such, anaphora should fall outside of the domain of pragmatics and be housed within the domain of cognition. However, I think a more interesting approach is to consider whether, when defining pragmatics, to include *the self* as a possible interlocuter in a dialogue or conversation. With respect to children's development, the expansion of a definition of conversational interactant in this way could also be helpful when instances of pretend play or private speech share features typically deemed pragmatic (e.g., perspective-dependent voicing; talk about one's mental states) when they occur in conversations with people.

5.   Social knowledge and *social pragmatics*

Social knowledge, often also construed as cultural knowledge, is commonly included in discussions of pragmatic competence. Indeed, pragmatics is argued, not infrequently, to be a process of social development and part of children's enculturation (Ninio and Snow 1996). Pragmatics has also been argued to be a component of social competence (Goffman 1981; Prutting 1982; Gallagher 1991b).

In a very insightful review of pragmatic models, Ninio and Snow (1996) describe the many tricky and confounding boundary issues when distinguishing pragmatics from other domains of knowledge. They highlight in particular the difficulty of distinguishing culturally appropriate *social* behaviours (e.g., table manners) from culturally appropriate *linguistic* behaviours (e.g., polite etiquette) and conclude that "we lack guidelines to distinguish rules for speech from societal regulation of interpersonal behavior in general" (Ninio and Snow 1996: 5).

I think it is possible however, to say more than this about the type of social knowledge that could underlie social pragmatics. One could view children's developing pragmatic competence in this area as involving *an appreciation of knowledge having to do with people and groups that a speaker must take into account to better align with the perspective of the person or group.* The 'perspective' in question is different from that of domains of social cognition and cognition and would include taking into account, when communicating with others, such factors as biological features (e.g., gender, age), aspects of physical appearance (e.g., status indicators such as professional attire), aspects of behaviour (e.g., goes to work), the type of social setting or activity (e.g., receiving a gift or compliment, playing a game), or conventions that relate to maintaining harmonious communication with people (e.g., don't order others around). As a result of this approach, this domain of social pragmatics would contain the adaptations of language most often discussed as rule-based (e.g., polite forms, use of formal terms such as *Mrs* or *Dr* to address adults), but would not be limited to this type of rule-based knowledge. And it would contrast with mindful and cognitive pragmatics in that the knowledge invoked is less about the shared/non-shared mental state or cognitive perspective of speaker and listener(s) and more about the *shared/non-shared communicative expectations of other people* – be they a single interactant, a small peer group, or a much larger unit such as a country – and the adaptations that may be necessary as a result. Thus the 'perspective' to be taken is one that is, for the most part, not related to knowledge of any specific person per se, but rather features of persons and their behaviour and conventions surrounding different communicative interactants and settings.

A number of empirical findings indeed illustrate how children are able to take into account such factors in their communication with others in the early years. As an early example of children's talk as influenced by their observations about people's behaviour, Dunn (1988) noted, in a hallmark longitudinal series of studies involving 52 children observed at home, four types of inquiries that children in all the families made about other people and that emerged as early as at two years of age: inquiries about their whereabouts, their actions, their inner states, and rules that people must follow. Dunn argues that children's questions, such as *Where Glynnis gone?* were not born of anxiety. Rather, "the interest of the children in knowing where their friends and family members were, and what they were doing was evident, as was their pleasure in recounting with the mother the familiar routines these other people follow" (Dunn 1988: 130–131). And it is of note that Dunn

did not find that one child was interested in talking about these behaviours of people but another child was not (if typically developing). *All* the children of a given age were found to talk about these topics. Dunn's findings regarding common types of questions and common content or topics within these types concur well with those of other researchers examining children's early questions (e.g., Wode 1971; Ervin-Tripp 1977; Tyack and Ingram 1977; Bloom, Merkin, and Wooten 1982; Nelson 1989; Shatz 1994).

By preschool age, a number of developments indicate that children are becoming quite competent at adjusting their communication to different speech communities. Gumperz (1982) defined a speech community as a group of speakers that shares rules and norms for using language. For example, Kyratzis (2001) has found differences in preschool-aged boys' and girls' expressions of "emotion talk," with boys, for example, evolving norms against the expression of scaredness. Nakamura (2001) found differences in communicative style and use of specific language forms among boy and girl same-sex peer interactions. In a study examining preschoolers' topic initiations with peers, O'Neill, Main and Ziemski (2009) found that some categories were used only by one sex. For example, only boys used jokes to initiate communication; girls were not observed over 21 sessions to ever do so. Kyratzis, Marx and Wade (2001) found that a peer's expertise and competence at a task was taken into account by preschoolers who then adjusted their use of assertive or deferent control acts accordingly. And studies of role play (e.g., Andersen 1990) have clearly demonstrated that four- to six-year-olds take the relative power of speakers into account by, for example, producing less polite and more direct requests for more powerful speakers (e.g., father, doctor, teacher) and more polite and more indirect requests for lower status speakers (e.g., child). Children also adjusted their speech depending on the age of the speaker. When speaking for a child, children simplified word forms and omitted function words.

As a final example, Fujiki and Brinton's (2009) study of behaviours leading to successful peer group entry would fit well within the domain of social pragmatics. That is, children must acquire the knowledge that direct entry strategies such as the verbal request *Can I play?* are often unsuccessful and that a better strategy is to observe the activities of the group and find a way to make their actions or utterances similar to or concordant with those of the group they wish to join. I believe these group entry skills can thus be viewed as requiring the child to assess the perspective of the group with respect to the activity or talk in question in order to adapt and align their own behaviour to be successful.

This overview has not been exhaustive, of course, and the interested reader is directed, for example, to Slobin et al.'s (1996) excellent edited book in honour of Susan Ervin-Tripp. Not only does this collection highlight the seminal work of Ervin-Tripp, but it includes contributions by, and reviews the work of, many other seminal researchers in the field of developmental sociolinguists (e.g., Slobin 1985; Ochs 1988).

As a last point, of the three areas of pragmatics, it is social pragmatics that lends itself most easily to a representation in terms of memorized rules of sorts that pertain to both non-verbal (e.g., bowing; hand gestures) and verbal communication. However, rather than rules, a more appropriate characterization of social pragmatics, I believe, is that it involves the identification and characterization of "the norms that underlie the spontaneous use of language of a given social group" (Escandell-Vidal 2004: 2). That is, users of a language are performing a type of statistical generalization in which, by observing the practices of speakers in a given community, speakers' preferences with respect to such communicative forms as requests, apologies, or refusals, and communicative behaviours such as turn-taking, they try to establish the norms that can then be contrasted and compared with those of different cultural groups (Blum-Kulka, House, and Kasper 1989; Escandell-Vidal 2004). In some approaches, this characterization of social pragmatics has been contrasted with a characterization of cognitive pragmatics as aiming to identify principles involving more general, universal causal, mechanical explanations (Escandell-Vidall 2004), such as the principles set forth by Grice (1975, 1989), Sperber and Wilson (1986/1995, 1987) and Levinson (2000).

6.   Limitations of this approach

The approach to pragmatics that I have presented in this chapter is only a beginning working model and starting point. The aim of my approach was to see whether one might be able to offer some structure to the domain of pragmatics, and the myriad of abilities acquired by children labelled as pragmatic, by considering in more depth how the types of knowledge underlying these abilities might be different. The reason for believing they might differ is increasing empirical work documenting in more detail the kinds of understandings that may underlie children's (and adults') pragmatic abilities. Moreover, the goal was also not to simply list a host of different kinds of knowledge underlying different pragmatic abilities, but to explore whether one might be able to discern some key types of knowledge. The end result was a framework that focuses on the contribution of social, social-cognitive, and cognitive knowledge to children's pragmatic language development and divides the pragmatic domain into social pragmatics, mindful pragmatics, and cognitive pragmatics, respectively.

One limitation of the current approach is that by carving the domain of pragmatics into three specific components, one feels compelled to house a particular ability into one component only, when in fact an ability may draw on knowledge across several components. That is, in some cases it may be more a matter of gradation, rather than a yes-no classification. For example, the ability of 22-month-old children to recognize what is relevant to talk about, discussed at the beginning of the section on cognitive pragmatics, may be such a case. Some readers may feel

that this ability relies equally on social-cognitive and cognitive knowledge, or more on the former than on the latter. Nevertheless, regardless of the decision, I believe the process of considering abilities like this from the vantage point of different key types of knowledge that may underlie them is a valuable exercise. Even if the outcome is that an ability is viewed as relying on social-cognitive and cognitive abilities, this may represent a further refinement and deeper understanding of this ability, which can then lead to a better understanding of the nature of impairment and more targeted and effective intervention activities.

The main definition of pragmatics, and the definitions of social, social-cognitive and cognitive pragmatics, presented here are also working definitions. Definitions of pragmatics are notoriously varied. I have attempted, via an overall focus on perspective-taking, to define the three components in terms of three specific and different types of perspective-taking relating to individual conceptual perspectives (mindful pragmatics); to more generally applicable conceptual perspectives (cognitive pragmatics); and to aligning with conversational expectations (social pragmatics).

Finally, the scope of this paper has not permitted more in-depth discussion related to abilities housed in the three domains of knowledge, but not within the domain of pragmatics (the non-highlighted areas in Figure 1). These areas might be best viewed as representing knowledge that has been acquired in each of these domains up to the present by an individual. Representative abilities housed within each of these three areas could be stereotype knowledge and social etiquette rules (social knowledge); recognition of emotional expressions and an understanding of mental state concepts (social-cognitive knowledge); and script knowledge and our understanding of time (cognitive knowledge). These four areas of knowledge should not be viewed as isolated. Rather, connections can (and will) certainly exist between these different domains of knowledge that are currently not depicted in Figure 1 given its intended aim to focus on pragmatics.

Relevant to the focus of this chapter however, is that although the acquisition of linguistic terms and concepts housed within these types of knowledge may be dependent on communication with others, it may not be warranted to regard the process of acquiring such knowledge as within the domain of pragmatics based on empirical evidence. For example, temporal terms such as *tomorrow* and *yesterday* or scalar implicatures – whether an utterance implies *some* versus *all* or a part of a whole (e.g., painting the roof versus painting the house; cf. Papafragou and Tantalou 2004; Huang and Snedeker 2009) – may be linguistic terms whose acquisition (albeit via exposure in conversation) rests on more general cognitive and learning processes outside the domain of pragmatics. These examples would stand in stark contrast to the earliest stages of word learning already discussed, where evidence suggests the existence of an intricate relation between infants' successful acquisition of new terms with the child's developing social-cognitive conceptual perspective-taking abilities (e.g., understanding focus of attention).

It is clear that much remains to be understood about the relation between children's developing pragmatic abilities and concurrent developments in other domains of knowledge. But understanding these relations better is crucial to understanding key pragmatic outcomes, such as being an *effective* communicator. Exactly what abilities underlie being an effective communicator is not well defined in the literature. Ninio and Snow (1996: 140–141) suggest that improving effectiveness as a communicator "probably depends on the mastery of a host of cognitive principles that at present are not well understood and whose developmental history has not yet been charted. Some candidates for this list include the conversational maxims and perspective-taking". I believe the provision of a more detailed and principled way to organize different pragmatic abilities based on the type of knowledge they may recruit, and the type of perspective-taking that may be involved, is a valuable step in defining more clearly the domain of pragmatics and more specifically the course of pragmatic language development as children become effective, successful and enthusiastic communicators.

References

Abbeduto, Leonard and Katherine J. Short-Meyerson
   2002   Linguistic influences on social interaction. In: Howard Goldstein, Louise A. Kaczmarek, and Kristina M. English (eds.), *Promoting Social Communication: Children with Developmental Disabilities from Birth to Adolescence*, 27–54. Baltimore: Paul H. Brookes.

Adams, Catherine
   2005   Social communication intervention for school-age children: Rationale and description. *Seminars in Speech and Language* 26: 181–188.

Allan, Keith
   1986   *Linguistic Meaning*. London: Routledge & Kegan Paul.

Andersen, Elaine S.
   1990   *Speaking with Style: The Sociolinguistic Skills of Children*. London: Routledge.

Anglin, Jeremy M.
   1993   Vocabulary development: A morphological analysis. *Monographs of the Society for Research in Child Development* 58 (serial no. 258).

Astington, Janet W.
   1993   *The Child's Discovery of the Mind*. Cambridge, MA: Harvard University Press.

Astington, Janet W., Paul L. Harris and David R. Olson
   1988   *Developing Theories of Mind*. New York: Cambridge University Press.

Austin, John L.
   1962   *How to Do Things with Words*. Oxford: Oxford University Press.

Baldwin, Dare A.
   1991   Infants' contributions to the achievement of joint reference. *Children Development* 62: 875–890.

Baldwin, Dare A.
   1993   Early referential understanding: Infants' ability to recognize referential acts for what they are. *Developmental Psychology* 29: 832–843.

Bartsch, Karen and Henry M. Wellman
   1995   *Children Talk about the Mind*. New York: Oxford University Press.

Bates, Elizabeth
   1976   *Language and Context: The Acquisition of Pragmatics*. New York: Academic Press.

Bates, Elizabeth, Laura Benigni, Inge Bretherton, Luigia Camaioni and Virginia Volterra
   1979   *The Emergence of Symbols: Cognition and Communication in Infancy*. New York: Academic Press.

Bates, Elizabeth, Luigia Camaioni and Virginia Volterra
   1975   The acquisition of performatives prior to speech. *Merrill-Palmer Quarterly* 21: 205–226.

Bates, Elizabeth and Brian MacWhinney
   1982   Functionalist approaches to grammar. In: Eric Wanner and Lila Gleitman (eds.), *Language Acquisition: The State of the Art*, 173–218. Cambridge, MA: MIT Press.

Bergen, Doris
   2001   Finding the humor in children's play. In: Jaipaul L. Roopnarine (ed.), *Conceptual, Social Cognitive, and Contextual Issues in the Fields of Play*, 209–222. Westport, CT: Ablex Publishing.

Bernicot, Josie, Virginia Laval and Stephanie Chaminaud
   2007   Nonliteral language forms in children: In what order are they acquired in pragmatics and metapragmatics? *Journal of Pragmatics* 39: 2115–2132.

Bloom, Lois and Margaret Lahey
   1978   *Language Development and Language Disorders*. New York: John Wiley and Sons.

Bloom, Lois, Susan Merkin and Janet Wootten
   1982   Wh-questions: Linguistic factors that contribute to the sequence of acquisition. *Child Development* 53: 1084–92.

Blum-Kulka, Shoshana, Juliane House and Gabriele Kaspar (eds.)
   1989   *Cross-cultural Pragmatics: Requests and Apologies*. Norwood: Ablex.

Brown, Penelope and Stephen C. Levinson
   1987   *Politeness: Some Universals in Language Usage*. Cambridge: Cambridge University Press

Bruner, Jerome
   1975   From communication to language: A psychological perspective. *Cognition* 3: 255–287.

Bruner, Jerome
   1990   *Acts of Meaning*. Cambridge, MA: Harvard University Press.

Bruner, Jerome
   1991   The narrative construction of reality. *Critical Inquiry* 18: 1–21.

Bruner, Jerome and Carol Feldman
   1993   Theories of mind and the problem of autism. In: Simon Baron-Cohen, Helen Tager-Flusberg and David. J. Cohen (eds.), *Understanding other Minds: Perspectives from Autism*, 267–291. Oxford: Oxford University Press.

Bucciarelli, Monica, Livia Colle and Bruno G. Bara
    2003   How children comprehend speech acts and communicative gestures. *Journal of Pragmatics* 35: 207–241.
Cameron, E. Leslie, Katherine M. Kennedy and Catherine A. Cameron
    2008   "Let Me Show You a Trick!": A Toddler's Use of Humor To Explore, Interpret, and Negotiate Her Familial Environment During a Day in the Life. *Journal of Research in Childhood Education* 23: 5–18.
Capelli, Carol. A., Noreen Nakagawa and Cary M. Madden
    1990   How children understand sarcasm: The role of context and intonation. *Child Development* 61: 1824–1841.
Capps, Lisa, Jennifer Kehres and Marian Sigman
    1998   Conversational abilities among children with autism and children with developmental delays. *Autism* 2: 325–344.
Carpendale, Jeremy and Charlie Lewis
    2006   *How Children Develop Social Understanding*. Oxford: Blackwell.
Chafe, Wallace
    1970   *Meaning and the Structure of Language*. Chicago: University of Chicago Press.
Chandler, Michael J., Anna S. Fritz and Suzanne Hala
    1989   Small scale deceit: Deception as a marker of 2-, 3- and 4-year-olds' theories of mind. *Child Development* 60: 1263–1277.
Clancy, Patricia M.
    1985   The acquisition of Japanese. In: Daniel I. Slobin (ed.), *The cross-linguistic study of language acquisition*, Vol. I, 373–524. Hillsdale, NJ: Lawrence Erlbaum.
Clark, Eve V.
    1978   From gestures to word: On the natural history of deixis in language acquisition. In: Jerome S. Bruner and A. Garton (eds.), *Human Growth and Development: Wolfson College Lectures 1976*, 340–408. Oxford: Clarendon Press.
Clark, Eve V.
    1987   The principle of contrast: A constraint on language acquisition. In: Brian MacWhinney (ed.), *Mechanisms of Language Acquisition*, 1–33. Hillsdale, NJ: Lawrence Erlbaum.
Clark, Eve V.
    1990   The pragmatics of contrast. *Journal of Child Language* 17: 417–431.
Clark, Eve V.
    1993   *The Lexicon in Acquisition*. Cambridge, England: Cambridge University Press.
Clark, Eve V.
    1995   Later lexical development and word formation. In: Paul Fletcher and Brian MacWhinney (eds.), *The Handbook of Child Language*, 393–412. Oxford: Blackwell.
Clark, Eve V.
    2009   *First Language Acquisition*. 2nd ed. Cambridge, England: Cambridge University Press.
Clark, Eve V. and Olga K. Garnica
    1974   Is he coming or going? On the acquisition of deictic verbs. *Journal of Verbal Learning and Verbal Behaviour* 13: 559–572.

Clark, Eve V. and James B. Grossman
    1998   Pragmatic directions and children's word learning. *Journal of Child Language* 11: 611–625.
Clark, Eve V. and C. J. Sengul
    1978   Strategies in the acquisition of deixis. *Journal of Child Language* 5: 457–475.
Dale, Philip
    1980   Is early pragmatic development measurable? *Journal of Child Language* 7: 1–12.
Demorest, Amy, Christine Meyer, Erin Phelps, Howard Gardner and Ellen Winner
    1984   Words speak louder than actions: Understanding deliberately false remarks. *Child Development* 55: 1527–1534.
Donald, Merlin
    2001   *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. Cambridge, MA: Harvard University Press.
Dunn, Judy
    1988   *The Beginnings of Social Understanding*. Cambridge, MA: Harvard University Press.
Dunn, Judy and Carol Kendrick
    1982   *Siblings: Love, Envy and Understanding*. Cambridge, MA: Harvard University Press.
Dunn, Judy and Marilyn Shatz
    1989   Becoming a conversationalist despite (or because of) having an older sibling. *Child Development* 60: 399–410.
Erbaugh, Mary S.
    1992   The acquisition of Mandarin. In: Daniel I. Slobin (ed.), *The cross-linguistic study of language acquisition*, Vol. III, 373–455. Hillsdale NJ: Lawrence Erlbaum.
Ervin-Tripp, Susan M.
    1977   Wait for me roller skate. In: Susan M. Ervin-Tripp and Claudia Mitchell-Kernan (eds.), *Child Discourse*, 165–188. New York: Academic Press.
Ervin-Tripp, Susan M. and Claudia Mitchell-Kernan
    1977a   Introduction. In: Susan M. Ervin-Tripp and Claudia Mitchell-Kernan (eds.), *Child Discourse*, 1–26. New York: Academic Press.
Ervin-Tripp, Susan, and Claudia Mitchell-Kernan (eds.)
    1977b   *Child Discourse*. Academic Press, New York.
Ervin-Tripp, Susan M., Amy Strage, Martin Lampert and Nancy Bell
    1986   Understanding requests. *Linguistics* 25: 107–143.
Escandell-Vidal, Victoria
    2004   Norms and principles: Putting social and cognitive pragmatics together. In: Rosina Márquez-Reiter and María Elena Placencia (eds.) *Current Trends in the Pragmatics of Spanish*, 347–371. Amsterdam – Philadelphia: John Benjamins.
Faerch, Claus and Gabriele Kasper
    1984   Pragmatic knowledge: rules and procedures. *Applied Linguistics* 5: 214–25.
Fecica, Agnieszka M. and Daniela K. O'Neill
    2010   A step at a time: Preliterate children's simulation of narrative movement during story comprehension. *Cognition* 116: 368–381.

Filippova, Eva and Janet W. Astington
  2008   Further development in social reasoning revealed in discourse irony under-
          standing. *Child Development* 79: 126–138.
Foster, Susan H.
  1990   *The Communicative Competence of Young Children*. Harlow, UK: Longman
          Group.
Fujiki, Martin, and Bonnie Brinton
  2009   Pragmatics and social communication in child language disorders. In: Richard
          G. Schwartz (ed.), *Handbook of Child Language Disorders*, 496–423. New
          York: Psychology Press.
Gallagher, Tanya M.
  1991a   A retrospective look at clinical pragmatics. In: Tanya M. Gallagher (ed.),
          Pragmatics of Language: Clinical Practice Issues, 1–9. New York: Chapman
          and Hall.
Gallagher, Tanya M.
  1991b   Language and social skills: Implications for assessment and intervention with
          school-age children. In: Tanya M. Gallagher (ed.), *Pragmatics of Language:
          Clinical Practice Issues*, 11–41. New York: Chapman and Hall.
Garvey, Catherine
  1977   *Play*. Cambridge, MA: Harvard University Press.
Gee, John Paul
  2004   *Situated Language and Learning: A Critique of Traditional Schooling*. Lon-
          don: Routledge.
Gibbs, Raymond W.
  1987   Linguistic factors in children's understanding of idioms. *Journal of Child Lan-
          guage* 14: 569–586.
Girouard, Pascale, C., Marcelle Ricard and Therese Gouin Decarie
  1997   The acquisition of personal pronouns in French-speaking and English-speak-
          ing children. *Journal of Child Language* 24: 311–326.
Goffman, Erving
  1981   *Forms of talk*. Oxford: Blackwell.
Green, Georgia M.
  1989   *Pragmatics and Natural Language Understanding*. 2nd edition. Hillsdale,
          New Jersey: Erlbaum.
Grice, H. Paul
  1975   Logic and conversation. In: Peter Cole and Jerry L. Morgan (eds.), *Syntax and
          semantics 3: Speech acts*. 225–242. New York: Academic Press.
Grice, H. Paul
  1989   *Studies in the Way of Words*. Cambridge, MA: Harvard University Press.
John J. Gumperz
  1982   *Discourse Strategies*. Cambridge, UK: Cambridge University Press.
Gumperz, John J. and Dell Hymes
  1964   The ethnography of communication. *American Anthropologist* 66b, Pt. 2
          [Special Publication.]
Harris, Paul L., Marc de Rosnay and Francisco Pons
  2005   Language and children's understanding of mental states. *Current Directions in
          Psychological Science* 14: 69–73.

Heath, Shirley Brice
  1983   *Ways with Words: Language, Life and Work in Communities and Classrooms*.
          Cambridge, UK: Cambridge University Press.
Hoff-Ginsberg, Erika
  1996   *Language Development*. Pacific Grove, CA: Thompson Brooks/Cole
Hollos, Marida and William Beeman
  1978   The development of directives among Norwegian and Hungarian children: An
          example of communicative style in culture. *Language in Society* 7: 345–355.
Huang, Yi Ting and Jesse Snedeker
  2009   Semantic meaning and pragmatic interpretation in 5-year-olds: Evidence from
          real-time spoken language comprehension. *Developmental Psychology* 45:
          1723–1739.
Hymes, Dell
  1972   On communicative competence. In: John B. Pride and Janet Holmes (eds.), *So-
          ciolinguistics*, 269–293. London: Penguin.
Jaswal, Vikram J. and Lauren S. Malone
  2007   Turning believers into skeptics: 3-year-olds' sensitivity to cues to speaker
          credibility. *Journal of Cognition & Development* 8: 263–283.
Koenig, Melissa A. and Paul H. Harris
  2005   Preschoolers mistrust ignorant and inaccurate speakers. *Child Development*
          76: 1261–1277.
Kyratzis, Amy
  2001   Emotion talk in preschool same-sex friendship groups: Fluidity over time and
          context. *Early Education and Development* 12: 359–392.
Kyratzis, Amy, Traci Marx and Evelyn Wade
  2001   Preschoolers' communicative competence: register shift in the marking of
          power in different contexts of friendship group talk. *First Language* 21:
          387–431.
Levinson, Stephen C.
  2000   *Presumptive Meanings: The Theory of Generalized Conversational Implica-
          ture*. Cambridge, MA: Harvard University Press.
Levy, Elena T.
  2003   The roots of coherence in discourse. *Human Development* 46: 169–188.
Lucariello, Joan and Catherine Mindolovich
  1995   The development of complex metarepresentational reasoning: The case of situ-
          ational irony. *Cognitive Development* 10: 551–576
Markman, Ellen M.
  1989   *Categorization and Naming in Children: Problem of Induction*. Cambridge,
          MA: MIT Press.
McGhee, Paul E.
  1979   *Humor: Its Origin and Development*. San Francisco: W. H. Freeman and Com-
          pany.
McTear, Michael F. and Gina Conti-Ramsden
  1992   *Pragmatic Disability in Children*. London: Whurr.
Mervis, Carolyn B.
  1987   Child-basic object categories and early lexical development. In: Ulrich Neisser
          (ed.), *Concepts and Conceptual Development: Ecological and Intellectual Fac-
          tors in Categorization*, 201–233. Cambridge, UK: Cambridge University Press.

Nakamura, Keiko
  2001   The acquisition of polite language in Japanese children. In Keith E. Nelson and A. Aksu-Koç (eds.), *Children's Language*, Vol X, 93–112. Mahwah, NJ: Lawrence Erlbaum.

Nelson, Katherine
  1981   Individual differences in language development: Implications for development and language. *Developmental Psychology* 17: 170–187.

Nelson, Katherine
  1989   *Narratives from the Crib*. Cambridge, MA: Harvard University.

Ninio, Anat and Catherine E. Snow
  1996   *Pragmatic Development*. Boulder, CO: Westview Press.

Nippold, Marilyn A.
  1998   *Later Language Development: The School-Age and Adolescent Years*. 2nd edition. Austin, TX: Pro-Ed.

Ochs, Elinor
  1988   *Culture and Language Development: Language Acquisition and Language Socialization in a Samoan Village*. Cambridge, UK: Cambridge University Press.

O'Neill, Daniela K.
  1996   Two-year-olds' sensitivity to a parent's knowledge state when making requests. *Child Development* 67: 659–677.

O'Neill, Daniela K.
  2005   Talking about "new" information: The given/new distinction and children's developing theory of mind". In: Janet W. Astington and Jodie Baird (eds.), *Why Language Matters for Theory of Mind*, 84–105. Oxford: Oxford University Press.

O'Neill, Daniela K.
  2007   The Language Use Inventory for Young Children: A parent-report measure of pragmatic language development for 18–47-month-old children". *Journal of Speech, Language and Hearing Research* 50: 1–15.

O'Neill, Daniela K.
  2009   *Language Use Inventory: Manual*. Waterloo, ON, Canada: Knowledge in Development.

O'Neill, Daniela K. and Francesca Happé
  2000   Noticing and commenting on what's new: differences and similarities among 22-month old typically developing children, children with Down syndrome, and children with autism. *Developmental Science* 3: 457–478.

O'Neill, Daniela K. and Amanda Holmes
  2002   Young preschoolers' ability to reference story characters: the contribution of gesture and character speech. *First Language* 22: 73–103.

O'Neill, Daniela K., Rebecca M. Main and Renata Ziemski.
  2009   "I like Barney." Preschoolers' spontaneous conversational initiations with peers. *First Language* 29: 401–425.

O'Neill, Daniela K., Michelle J. Pearce and Jennifer L. Pick
  2004   Predictive relations between aspects of preschool children's narratives and performance on the Peabody Individualized Achievement Test – Revised: Evidence of a relation between early narrative and later mathematical ability. *First Language* 24: 149–183.

Papafragou, Anna and Niki Tantalou
  2004   The computation of implicatures by young children. *Language Acquisition* 12: 71–82.

Pasquini, Elisabeth S., Kathleen H. Corriveau, Melissa A. Koenig and Paul H. Harris
  2007   Preschoolers monitor the relative accuracy of informants. *Developmental Psychology* 43: 1216–1226.

Perkins, Michael
  2007   *Pragmatic Impairment*. Cambridge: Cambridge University Press.

Perkins, Michael R.
  2009   Pragmatic impairment as an emergent phenomenon. In: Martin J. Ball, Michael R. Perkins, Nicole Muller and Sara Howard (eds.), *The Handbook of Clinical Linguistics*, 79–91. Oxford: Blackwell.

Perner, Josef
  1991   *Understanding the Representational Mind*. Cambridge, MA: MIT Press.

Perner, Josef and Heinz Wimmer
  1985   "John thinks that Mary thinks that …": Attribution of second-order beliefs by 5- to 10-year-old children. *Journal of Experimental Child Psychology* 39: 437–471.

Pons, Francisco, Paul L. Harris and Marc de Rosnay
  2004   Emotion comprehension between 3 and 11 years: Developmental periods and hierarchical organization. *European Journal of Developmental Psychology* 1(2): 127–152

Prutting, Carol A.
  1982   Pragmatics as social competence. *Journal of Speech and Hearing Disorders* 47: 123–134.

Reddy, Vasudevi
  1991   Playing with others' expectations: teasing and mucking about in the first year. In: Andrew Whiten (ed.), *Natural Theories of Mind*, 143–158. Oxford: Blackwell.

Rall, Jaime and Paul L. Harris
  2000   In Cinderella's slippers? Story comprehension from the protagonist's point of view. *Developmental Psychology* 36: 202–208

Rees, Norma S.
  1982   An overview of pragmatics or what is in the box? In: J. V. Irwin (ed.), *Pragmatics: The Role in Language Development*, 1–13. LaVerne, CA: Fox Point.

Ryckebusch, Celine and Haydee Marcos
  2004.   Speech acts and context in young children: influence of parent gender and type of play from 1;5 to 2;3. *Journal of Pragmatics* 36: 883–897.

Saylor, Megan M., Jodie A. Baird and Catherine Gallerani
  2006   Telling others what's new: Preschoolers' adherence to the given-new contract. *Journal of Cognition & Development* 7: 341–379.

Schiefelbusch, Richard L. and Joanne Pickar
  1984   *The Acquisition of Communicative Competence*. Baltimore, MD: University Park Press.

Searle, John R.
  1969   *Speech Acts: An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.

Shatz, Marilyn
    1994   *A Toddler's Life: Becoming a Person*. New York: Oxford University Press.
Sherrod, Lonnie and Michael Lamb
    1981   Infant social cognition: An introduction. In: Michael Lamb and Lonnie Sherrod (eds.), *Infant social cognition: Empirical and Theoretical Considerations*, 1–10. Hillsdale, NJ: Erlbaum.
Short-Meyerson, Katherine J.
    2010   Preschoolers' establishment of mutual knowledge during scripted interactions. *First Language* 30: 219–236.
Short-Meyerson, Katherine J. and Leonard Abbeduto
    1997   Preschoolers' communication during scripted interactions. *Journal of Child Language* 24: 469–493.
Shwe, Helen and Ellen M. Markman
    1997   Young children's appreciation of the mental impact of their communicative signals. *Developmental Psychology* 33: 630–636.
Slobin, Dan I.
    1985   Cross-linguistic evidence for the language-making capacity. In: Dan I. Slobin (ed.), *The Crosslinguistic Study of Language Acquisition, Vol. 2: Theoretical Issues*, 1157–1256. Hillsdale, NJ: Lawrence Erlbaum.
Slobin, Dan I., Julie Gerhardt, Amy Kyratzis and Jiansheng Guo (eds.)
    1996   *Social Interaction, Social Context, and Language: Essays in Honor of Susan Ervin-Tripp*. Mahwah, NJ: Lawrence Erlbaum.
Smith, Benita R. and Eva Leinonen
    1992   *Clinical Pragmatics: Unravelling the Complexities of Communicative Failure*. London: Chapman and Hall.
Sperber, Dan and Deidre Wilson
    1986/95   *Relevance: Communication and Cognition*. Cambridge: Harvard University Press. [Second edition with Postface 1995]
Sperber, Dan and Deidre Wilson
    1987   Precis of Relevance: Communication and Cognition. *Behavioral and Brain Sciences* 10: 697–754.
St. James, Paula and Helen Tager-Flusberg
    1994   An observational study of humor in autism and down syndrome. *Journal of Autism and Developmental Disorders* 24: 603–617.
Thompson, Linda
    1996   The development of pragmatic competence: Past findings and future directions for research. In: Linda Thompson (ed.), *Children Talking: The Development of Pragmatic Competence*, 3–21. Philadelphia, PA: Multilingual Matters.
Tomasello, Michael
    1988   The role of joint attentional process in early language acquisition. *Language Sciences* 10: 69–88.
Tomasello, Michael
    1992   The social bases of language acquisition. *Social Development* 1: 67–87.
Tomasello, Michael
    1999   *The Cultural Origins of Human Cognition*. Cambridge, MA: Harvard University Press.
Tomasello, Michael
    2003   *Constructing a Language: A Usage-Based Theory of Language Acquisition*. Cambridge, MA: Harvard University Press.
Tomasello, Michael and Michelle E. Barton
    1994   Learning words in nonostensive contexts. *Developmental Psychology* 30: 639–650.
Tomasello, Michael and Ann C. Kruger
    1992   Joint attention on actions: Acquiring verbs in ostensive and non-ostensive contexts. *Journal of Child Language* 19: 311–334.
Tyack, Dorothy and David Ingram
    1977   Children's production and comprehension of questions. *Journal of Child Language* 4: 211–224.
Vega-Moreno, Rosa Elena
    2005   Idioms, transparency and pragmatic inference. *UCL Working Papers in Linguistics* 17: 389–425.
Verschueren, Jeff
    1999   *Understanding Pragmatics*. New York: Arnold.
Wetherby, Amy M.
    1991   Profiling pragmatic abilities in the emerging language in young children. In: Tanya M. Gallagher (ed.), *Pragmatics of Language: Clinical Practice Issues*, 249–281. New York: Chapman and Hall.
Wetherby, Amy M., Barry M. Prizant and Thomas A. Hutchinson
    1998   Communicative, social/affective, and symbolic profiles of young children with autism and pervasive developmental disorders. American Journal of Speech-Language Pathology 7: 79–91.
Wieman, Leslie A.
    1976   Stress patterns of early child language. *Journal of Child Language* 3: 283–286.
Winner, Ellen
    1988   *The Point of Words: Children's Understanding of Metaphor and Irony*. Cambridge, MA: Harvard University Press
Wode, Henning
    1971   Some stages in the acquisition of questions by monolingual children. *Word* 27: 261–310.