

## REVIEWS

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SWIFT, MARY D., *Time in child Inuktitut: a developmental study of an Eskimo-Aleut language*. Berlin/New York: Mouton de Gruyter, 2004. Pp. 315.

*The book.* *Time in child Inuktitut* is an exciting new book for anyone who is interested in temporal reference in child language. Indeed, anyone who wants to broaden their perspective on language acquisition will want to read Swift's analysis of the development of the speech of eight Inuit children between the ages of 1;0 and 3;6. Swift's investigation into the emerging temporal system of Inuktitut is based on data collected in two previous studies by Crago (1988) and Allen (1996). In each one of these previous projects, four children were videotaped during normal daily life in monolingual communities in arctic Quebec. 'Inuktitut is a polysynthetic, suffixing, head-marking language with a basic SOXV word order' (p. 11) and is also an ergative case-marked language.

*Remarkable conclusions.* Why would someone want to read a book about the development of temporal reference in this Eskimo-Aleut language? Let me start with a few quotes from the concluding chapter as follows: (1) 'Inuit children develop competence with overt future marking before overt past marking' (p. 274), (2) '... the first instances of past markers occur in non-resultative contexts with predominantly atelic verb stems in reference to past activities and states' (p. 275), and (3) '... the more general contrast between same day and different day may be more easily grasped than more specific, finer-grained contrasts of differing temporal distances within the same day' (p. 277). Looking just at these conclusions, it appears that these Inuit children are defying conventional wisdom, but there is more to the story.

*The background.* The literature review is accomplished and relevant to the goals of the book. Swift considers data and arguments from varied sources ranging from the seminal work of Brown (1973) to the current research. The perspective is crosslinguistic, with a scope that includes English (Sachs, 1983), German (Szagun, 1978), Turkish (Aksu-Koç, 1988), and many other languages. Swift incorporates research conducted within the Interactionist perspective and the Principles and Parameters framework, and cross-sectional experimental studies are presented alongside of longitudinal naturalistic observations. Even though the review has such a broad scope, it is consistently focused on the most important issues that are raised when observing the acquisition of an Inuit language, i.e. the concepts of future, aspect, and remoteness.

Inuktitut has a future – non-future tense split, the property of telicity within predicate structure plays a critical role in temporal reference, and there are remote tenses extending into the future and into the past. With this focus in mind, Swift reminds us of previous findings demonstrating that children utilize past/perfective and present/imperfective morphology prior to coding the concept of future. For example, Sachs (1983) reported that Naomi marked verbs referring to completed events with *-ed* and verbs referring to ongoing events with *-ing* at 1;5, and she only began to refer to future events outside of the immediate context when she was 2;5 (see Berman, 1985, for a similar age gap in Hebrew). Regarding aspect, Swift points the reader to the considerable body of research that indicates that some properties of lexical aspect (e.g. telicity) are functional at the initial phase of temporal reference (e.g. papers in Vol. 18 No. 54 of *First Language*, 1998). The most specific claim has come from Wagner (1998: 86) to the effect that ‘... children initially use present tense and/or imperfective morphology to mark atelicity and use past tense and/or perfective morphology to mark telicity’. While there is no published research on the acquisition of a language with remote tenses, Szagun (1978) observed and quantified that young children learning English and German made more frequent reference to the immediate past and future, and remote temporal reference emerged later, presumably linked to cognitive development.

*The data.* The child language data for this research were collected in the two previous studies cited above. All together, eight children were videotaped between the ages of 1;0 and 3;6, and the caregiver–child interactions were transcribed into CHAT format within CHILDES. Past, present, and future time reference was defined in reference to the time of the speech act. Swift determined the categories of lexical aspect within the Vendler-Dowty-Smith framework (e.g. see Van Valin & LaPolla, 1997, Chapter 3). While Inuktitut has a more extensive set of aspectual categories, only the five categories that are relatively productive in child language are pursued in detail. A form was considered to be productive if one or both of the following criteria obtained: (1) contrast with ‘a different verb base or a different ending’ (p. 140), and/or (2) given the same verb, a contrast involving presence versus absence of a form (see the explanation of ‘zero-marked’ verbs below). Adult language data were obtained from seven adults who were audio-taped during a number of elicitation procedures, e.g. 3 adults with Dahl’s (1985) TAM questionnaire and 4 different adults with Wittek’s (2002) video scene description task.

*The TAM system.* A realis versus irrealis opposition is at the core of the Inuktitut temporal system with future forms subsumed under irrealis. Non-future forms are realis forms, and they are divided into zero-marked forms and past remoteness forms. A zero-marked verb carries an obligatory inflection for person, number and mood, but it lacks an optional suffix for tense or

aspect. For zero-marked verbs, temporal reference depends on lexical aspect and, more specifically, on the property of telicity. In the target language, telic predicates are interpreted as ‘perfective/past’ and atelic predicates are interpreted as ‘imperfective/present’ (p. 34–36). Since an understanding of the interpretation of zero-marked verbs provides a cornerstone for the understanding of the acquisition process, I will cite Swift’s summary:

Zero-marked telic verbs, i.e. verbs that express a discrete change of state or location, are used in reference to completed state and location changes. Zero-marked atelic dynamic verbs are used in reference to ongoing activities, and zero-marked atelic non-dynamic verbs are used in reference to current physical and emotional states and current locations descriptions (p. 47).

The aspectual suffixes that appear in child Inuktitut are the following: (1) prospective *-si-*, (2) ingressive *-liq-*, (3) durative *-kainnaq-*, (4) terminative *-jariiq-*, and (5) perfect *-sima-*. Inuktitut has temporal remoteness suffixes in the future and the past. Three of the four future remoteness suffixes occur in the spoken language data, and they are: (1) near future, i.e., same day and soon, *-langa-*, (2) same day future, i.e., later today, *-niaq-*, and (3) distant future, i.e., tomorrow and beyond, *-laaq-*. Five degrees of remoteness are coded in the past as follows: (1) recent past, i.e., a few minutes to an hour or more, *-kainnaq-*, (2) same day past, i.e., earlier today, *-qqau-*, (3) yesterday past, *-lauq-*, (4) distant past, i.e., prior to yesterday, and habitual in the past or ‘used to’, *-lauju-*, (5) long ago past, *-lauqsima-*. There are five independent moods for main clause verbs as follows: (1) participial, i.e. the standard declarative, (2) imperative, (3) interrogative, (4) indicative, i.e. marked focus/surprise, and (5) negative indicative. Only one dependent mood enters into the data. The basic format for word formation in Inuktitut is [base – optional suffixes – obligatory person-number-mood inflection]. Swift presents the morphosyntactic system in Chapter 3 together with numerous examples taken either from child-directed speech or adult-directed elicited speech. In other words, the reader obtains a broad glimpse of the child’s linguistic experience as the TAM system is explained.

*The findings.* The earliest inflected verbs are imperatives and zero-marked verbs. Swift gives examples of Jini (1;4) using telic verbs like *katak-* ‘fall (inanimate)’ and *püiq-* ‘remove, come off’ to refer to recently completed events, as contrasted with Jini (1;8) using atelic dynamic verbs such as *tiituuq-* ‘drink tea’ and *sinik-* ‘sleep’ to refer to activities that co-occur with utterance time. While the zero-marked verb is not inflected for tense, the temporal/aspectual reference is clearly instantiated. The earliest and most frequent aspectual suffix is the prospective *-si-* ‘about to, going to’ which emerges in some children approaching 2;0. Hence, the initial TAM system functions with lexical and grammatical aspectual distinctions.

The initial TAM systems of Turkish make for an insightful comparison with Inuktitut. Aksu-Koç (1988) observed that Turkish children operate with a functionally similar system in the first phase of acquisition, arguing that they use, ‘... *-dI* to indicate completion, *-Iyor* to indicate ongoingness, and *-sIn*, immediate intention’ (p. 75). While fluent Turkish does not make this constraint, during the initial phase, *-dI* marked verbs were likely to be telic and *-Iyor* marked verbs atelic. In the second phase of acquisition, *-dI* (direct past experience), *-Iyor* (present durative), and *-sIn* (optative mood) were joined by *-(y)AcAk* (certain future).

In Inuktitut, the emergence of the prospective *-si-* only marks the beginning of the acquisition of grammatical aspect. Swift documents the gradual acquisition of aspectual suffixes, and she demonstrates how grammatical aspect interacts with lexical aspect. For example the ingressive *-liq-* specifies the initial boundary of an atelic predicate creating the meaning ‘and now’, and it yields a meaning of progressive as it launches a telic process. The fact that the categories of grammatical aspect are acquired in a gradual manner supports Stoll’s (1998) findings pertaining to the acquisition of aspectual meaning in Russian. The point is that the acquisition of aspect does not reduce to a contrast between perfective versus imperfective.

Some of the future remoteness suffixes emerge earlier and with greater frequency than any past remoteness suffixes at about 2;0. Swift attributes the order of acquisition to pragmatic factors. In the initial phase of acquisition, Inuit children use zero-marked verbs to refer to realis events, and therefore, morphology coding irrealis is more salient. Three of the four future tense suffixes are attested in the children’s language, and they are, in order of frequency: (1) near future, (2) distant future (tomorrow and beyond), and (3) same-day future. Near future (‘soon’) emerges first, and it is considerably more frequent than the other tenses (note the similarity to the second phase in the acquisition of Turkish). While expanding on her observations of productivity, Swift demonstrates how children use prospective *-si-* and near future *-langa-* contrastively in addition to other evidence.

Four of the five past temporal remoteness suffixes emerge at about MLU 4, as contrasted with future remoteness suffixes found at MLU 3. In the order of frequency of usage, they are: (1) recent past, (2) yesterday past, (3) same-day past, and (4) distant past. When extending temporal reference away from the deictic center, children progress from a suffix specifying recent events within the same day to a suffix that codes events that occurred a day or more removed. A similar pattern of extended remote temporal reference can be seen in the acquisition of temporal adverbs in child Polish (Weist & Buczowska, 1987). In Chapter 11, Swift analyses the temporal adverbs in her Inuit data and finds that they are relatively late and

infrequent. This finding is understandable in a language that has remote tenses.

*The conclusions.* I started this review with three quotations, each one of which described a remarkable pattern of acquisition. However, when these findings are related to the dynamics of the emerging Inuktitut temporal system, they correspond to acquisition patterns found in other languages. The aspectual/temporal reference to realized situations by zero-marked verbs provides the key to understanding the way in which the children construct the system. Telic predicates code completed/past and atelic predicates code ongoing/present. Thus, the semantic structure of the predicate plays a critical role in the system formation starting with the initial phase of acquisition. This property of the construction of a temporal system is salient in other languages, e.g. Polish (Weist, Pawlak & Carapella, 2004). Prospective aspect provides a way to code irrealis, including events anticipated subsequent to speech time. However, prospective aspect is likely to have an intentional value. The addition of the near future suffix creates a degree of balance to the system. Yet, the system remains incomplete. There is no way to locate atelic situations prior to speech time. The recent past suffix fills this void. At this phase of acquisition, children have a relatively robust temporal system, and they can/do proceed to utilize the remaining temporal morphology to move their capacity to express temporal location away from speech time. In her book, Swift reveals this fascinating analysis of a relatively unusual language, with numerous examples and an extensive appendix, making the presentation interesting and understandable.

## REFERENCES

- Allen, S. E. M. (1996). *Aspects of argument structure acquisition in Inuktitut*. Amsterdam: Benjamins.
- Aksu-Koç, A. (1988). *The acquisition of aspect and modality: the case of past reference in Turkish*. Cambridge: CUP.
- Berman, R. (1985). The acquisition of Hebrew. In D. I. Slobin (ed.), *The crosslinguistic study of language acquisition*, Vol. 1, 255–371. Hillsdale, NJ: Erlbaum.
- Brown, R. (1973). *A first language*. Cambridge, MA: Harvard University Press.
- Crago, M. (1988). *Cultural context in communicative interaction of young Inuit children*. Ph.D. Dissertation, McGill University.
- Dahl, O. (1985). *Tense and aspect systems*. Oxford: Basil Blackwell.
- Sachs, J. (1983). Talking about the there and then: the emergence of displaced reference in parent–child discourse. In K. E. Nelson (ed.), *Children's language*, Vol. 4, 1–28. Hillsdale, NJ: Erlbaum.
- Stoll, S. (1998). The role of lexical Aktionsart for the acquisition of Russian aspect. *First Language* 18, 351–78.
- Szagan, G. (1978). On the frequency of use of tenses in English and German children's spontaneous speech. *Child Development* 49, 898–901.
- Van Valin, R. D. & LaPolla, R. J. (1997). *Syntax: structure, meaning & function*. Cambridge: CUP.
- Wagner, L. (1998). *The semantics and acquisition of time in language*. Ph.D. Dissertation. University of Pennsylvania.

- Weist, R. M. & Buczowska, E. (1987). The emergence of temporal adverbs in child Polish. *First Language* 7, 217–29.
- Weist, R. M., Pawlak, A. & Carapella, J. (2004). Syntactic–semantic interface in the acquisition of verb morphology. *Journal of Child Language* 31, 31–60.
- Wittek, A. (2002). *Learning the meaning of change-of-state verbs: a case study of German*. (Studies in Language Acquisition 17.) Berlin: Mouton de Gruyter.

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SHOSHANA BLUM-KULKA & CATHERINE E. SNOW (eds), *Talking to adults: the contribution of multiparty discourse to language acquisition*. Mahwah, NJ: Erlbaum, 2002. Pp. 360. ISBN 0-8058-3666-8.

This book is introduced as the next step forward in the study of the child's environment for language acquisition. It is contrasted with the recordings of parent–child dyads described in the early studies of 'input', and is influenced by anthropological observations of socialization, which revealed a rich social nexus for language use. The work here is based on the transcription of video- or audio-taped material rather than unobtrusive observation.

Many of the data come from two projects: Blum-Kulka's (1997) comparison of family dinner-table talk in the U.S. and Israel, an Israeli follow-up in a different social class, and Snow's Home-school Study of Language and Literacy Development, with collaborators doing similar work in various countries. However, several studies lie outside these two projects: Nicolopoulou's chapter on peer narratives, Aronsson & Thorell's on peer role play, Brown's on adult socialization of child pragmatics even beyond meals, and Kasuyu's summary of bilingual issues. The countries represented include the U.S., Sweden, Norway, Greece, Italy, Israel, and Mayan Mexico.

The study of multiparty talk with children in different countries could have the goal of systematic cross-cultural comparison of similar features. Another goal has been to explore the theory that differences in family talk will be related to differences in school talk, and hence in school success. The final chapter by the editors makes this connection explicit by showing the links from home talk to the novel skills the school may demand, such as literacy.

The book goes well beyond these concerns. It is organized into three sections. The first two sections represent the work/play contrast of American culture. The first, largest, section is on narratives and explanations, the speech activities receiving most attention because they are expected to be the most closely related to school talk, the work side of childhood. The second

section separates out studies of affect and humour. The third is a mixed section highlighting, variously, contrast between cultures (examined through data from a non-western society), bilingualism, and peer play representing adult-child talk. This section closes with a summary of the issues in connecting home and school uses of language.

There is a well-focused introduction discussing briefly the history of studies of input, and exploring the many advantages of multiparty talk for language acquisition, in its widest sense. Here language acquisition includes developing knowledge of linguistic variation and the sociolinguistic information those varieties index, knowledge of a range of genres, understanding the kind of indirectness often learned from observation, and learning to take into account a variety of perspectives as one speaks and listens. The final chapter, by both editors, brings the diversity of language functions into focus through a rich and detailed discussion, and connects the skills acquired through multiparty talk at home and at school.

The bulk of the narrative research on children has come from elicited narratives, some cross-cultural, to be sure; the spontaneous narratives in family groups provide a different perspective since they may or may not be elicited, and may or may not involve multiple participants and various sorts of promptings or challenges. These papers, even those funded from the same project, take different perspectives on the many issues having to do with narration. These include who initiates the narrative and who establishes topic preferences, both of which turn out to vary with generation and culture.

Narrative features are shown to change dramatically between the dyadic elicitation setting and the family conversation setting. Properties in the child's stories in the two settings are not correlated, and performance in the two contexts reflects different abilities. Nicolopoulou went to preschools to look at narratives, which she studied through the technique of children's creation, dictation, and enactment. She points out that many children come to preschool with very weak abilities to construct a narrative with both characters and action. Her data suggest an important compensatory role of schools for children without a strong history of family narrative practice, whether from conversation or being read to.

At the other end in richness is the family data collected by Georgakopoulou in professional families in Greece. Greeks are said to have the advantage of a strong family encouragement of narrative performance – with narrated dialogue, repetitions, thematic and prosodic patterning, and above all the willingness to repeat and build on shared narratives – in contrast with families who discourage retellings. Children both elicited and told shared stories, but there were some constraints on telling if a story was second-hand rather than directly experienced. In the group context, a child can challenge details or contribute to the vividness of the main story, or a

child with telling rights can get the floor. These locally occasioned, shared family tellings provide a common history, a shared culture, a shared view of roles in the family and of values. I once received a class transcript analysis paper by a student who reported narrative retelling about photographs by a half-sibling who used a second-hand family narrative to become a member of her new family. In this way sharing of family narratives can be powerfully cohesive in function. One wonders about the role of extended family contact in this kind of tradition.

Aukrust's comparison of American and Norwegian family narratives revealed more school narratives by Oslo children than by Americans, and provided evidence that the Oslo parents knew the teachers and the other children in the stories by name. Aukrust found cultural differences in whether routine events are topics for story-telling. It is possible that in Norway, as in Greece, talking about what is already known is not devalued, as it appears to be in American culture.

Some of the chapters addressed explanatory talk in families, of interest because of the potential cognitive enrichment associated with hearing and producing explanations. Distinguishing explanatory from other informational talk is not simple, as Blum-Kulka details in a chapter on Israeli families. In conversational analysis, warrants are offered for dispreferred responses, and these can be seen as explanatory. Of course, justifications for requests and other face-threatening acts also may entail warrants. In this context, Blum-Kulka presents us with the transcript of a dispute, a speech event otherwise not in focus in the book. Explanations may not only occur in disputes; they may occasion narratives. One could take the position that they are not a single interactional category since they have so many functions and forms.

What gets explained, of course, surely varies culturally and with the age of the child; the two most frequent problematic categories for the children in the Israeli data were explaining social conventions and describing the functions of objects. Most of the time it was a parent who explained and a parent who elicited explanations from children, so in these families parents are custodians of the cognitive push explanations involve, and also promoters of the sharing of perspectives and knowledge.

There was also a count of lexical expressions of cognition, such as 'think' and 'believe' in the Israeli data. In my view, this is a somewhat weak way to approach cognition. There are many lexemes in child speech with different meanings than the adult conventional use, so for each child we need a distributional/contextual analysis. For example, in one data set I have, a child used 'I know' as a standard reply form, whether or not it was new information, a phrase apparently imitated as a conversational reply tactic, just as older speakers use 'you know' as a discourse marker. Is that a cognitive use? The only example from a child under 11;0 in



this chapter was of an idiomatic phrase, 'you know what?' as a discourse marker.

In the section on affect, Aukrust points out that multiparty talk allows children to witness or participate in richer, more complex exchanges. In comparing dyadic and multiparty family interactions, she found more teasing, irony, and pretense occurred when there were more parties, which permitted someone to be an audience. The most vivid of humorous practices came from the Italian data, which showed examples of sound play, puns, and poetically rich conversation, with the same sense of strong conversational cohesion as one sees in the Greek data. Fortunately, the transcripts are presented in Italian with glosses, so one can see the word play, the neologisms, the deconstruction of idioms, the reconstruction of the familiar. In my own data word play is very common in young children's peer interaction, but whether adults encourage or even tolerate nonsense sound play and creative variation on the familiar varies culturally, if we judge from these chapters. The absence of an outsider may have facilitated parental toleration of this play, too, in the Italian data.

Herot presents a chapter using a wide net for affect cues including voice, and shows both negative and positive affect in the family talk samples. Most negative affect in the study appeared in the family talk of single mothers with several children. This affect difference suggests a possible topic for future analyses of other family transcripts varying in the number of adults and children in families.

The last section of the book takes in a range of different perspectives on children's talk. In the Mayan community studied by Brown, deliberate lying to children is a standard socialization practice (similar to our telling children there is a rat in the basement, to keep them from going there, or that Santa Claus will come if they are good). Such 'nonsincere predictions' are unmasked eventually by children as they become more competent in understanding the perspectives of others and noticing the relation between threats and outcomes and the use of lies for persuasion. Brown reports that by 3;6, Tzeltal children can produce ironic novel utterances, in which literal truth is altered with pragmatic intent. My research on requests in Europe showed that insincere commands like 'Go ahead, spill the milk' are used to mean the opposite, and are understood by most children, at least in parts of Europe, by 4;0 or 5;0, (Ervin-Tripp, Strage, Lampert & Bell, 1987). By this age, Tzeltal children take responsibility for the care of younger siblings, and create insincere threats themselves for persuasive effect. Brown suggests the development of understanding and use of lies would be a valuable topic for further research.

Aronsson & Thorell look at how role play allows children to project their own views of adult-child talk in middle childhood. Their representation of family plus doctor roles provides a glimpse into what children learn from

the complexity of adult talk. In role play, we usually see children using a variety of voices in the dramatic scene, the voice of the child talking about the role play, the voice of the director announcing what is happening and who is on scene, or the enactment by a player being a father, perhaps with a pitch drop. The children move adroitly between these voices or perspectives, though the youngest children can become so engrossed in preparatory discussion of who gets what, or who plays what, that they never get to enactment.

By 4;0 they have acquired certain linguistic role cues, such as the 'well' of authority. Aronsson & Thorell report doctors' collective 'we', which in English, I found, is used by adults in authority, even when literally anomalous (Ervin-Tripp 1976). These data show clearly that the children have learned to use in appropriate contexts some of the pragmatic markers of adults at least to signify roles, even though they have little occasion to deploy them in their daily life.

Kasuya's chapter introduces the effects of parental language choice in developing bilingual competence, by showing examples of adult language switching, which presumably children can overhear. In the two families she studied, it proved crucial for child use that the speaker of the minority language spoke that language most of the time. We know, however, that family language practices, short of monolingual use, are not enough to maintain a child's minority language without community support outside the family. Korean speakers have difficulty learning address honorifics unless they are witnesses of multiparty talk between family members differing in age or generation (Jun, 1992). An immigrant nuclear family isn't enough. Kasuya points out that the multiparty family can be a good locus for learning code-switching and the pragmatics of each language.

There is an unusually large number of misspellings in the book, such as in the title on the cover and in many of the text glosses, and of delicious typos, such as 'the major feast of pragmatic development'(p. 113); those who quote should be alerted. This quality control may be the increasing effect both of publishing houses without editors and of the use of English as a lingua franca.

Children range from 3;0 to 16;0 in the examples, and there is basically no developmental orientation in most of the papers, so one can see this book as supplementary for teaching developmental pragmatics. We know that children's pragmatic skills change with age within this range, so we can hope that later projects collecting this kind of data will consider the age constellation of the families. Part of the problem is casual sampling, which usually results in great variation in family composition; we who do family projects have all found that we usually seek cooperative families who do not mind the intrusiveness of the camera. Later-born children, exposed to multiparty talk, have more pragmatic skills (Bernicot & Roux 1999), so gender, order, and ages all should be considered in sampling.

One of the most vivid impressions from this wide-ranging collection is the difference in what family interaction with children is like in different societies, even in those as near as Greece, Italy, and Israel. One cannot know whether these differences are due to the selective preferences of the authors, to the material they had to work from, to the fact that families might have been performing for outsiders, or even to the accidents of family selection. This book will be an inspiration to future research amplifying the many topics it introduces.

## REFERENCES

- Bernicot, J. & Roux, M. (1999). The pragmatic aspects of language of only children and second born children: analysis of conversations between French-speaking mothers and children. *Pragmatics in 1998: selected papers from the 6th International Pragmatics Conference*. J. Verschueren. Antwerp, International Pragmatics Association 2: 33–44.
- Blum-Kulka, S. (1997). Dinner talk: cultural patterns of sociability and socialization in family discourse. Mahwah, NJ, Erlbaum.
- Ervin-Tripp, S. M. (1976). Is Sybil there? The structure of some American English directives. *Language in society* 5: 25–66.
- Ervin-Tripp, S. M. A., Strage, A., Lampert, M. & Bell, N. (1987). Understanding requests. *Linguistics* 25: 107–43.
- Jun, D. (1992). *Bilingualism among Korean-Americans: on factors related to the knowledge of honorifics of the Korean language*. Unpublished honours thesis. Psychology Department. Berkeley, CA, University of California.

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TOMASELLO, M., *Constructing a language: a usage-based theory of language acquisition*. Cambridge, MA: Harvard University Press, 2003. Pp. 388. Name group not allowed Hardback Name group not allowed, £29.95. ISBN 0-674-01030-2.

For the past 40 years language development research has been dominated by the view that the acquisition of language can only be explained by assuming that children have access to a core set of innately specified grammatical principles, and that the process of language development reflects the mapping of these principles onto the particular language or languages being learned.

In *Constructing a Language*, Tomasello explicitly rejects this view for two reasons. First, he argues that it is based on an idealized view of what is being acquired. Thus, according to Tomasello, human languages are not closed systems of algebraic rules for manipulating words and morphemes, but structured inventories of constructions shaped by historical processes of grammaticalization. Since these constructions are defined at least in part by

the meanings that they convey and/or the functions that they serve, they can in principle be learned. Of course, the task of specifying how this is done represents an enormous challenge. However, if we are interested in developing a psychologically realistic model of language learning, it is a challenge that must be faced.

Second, he argues that it underestimates the potential power of the learning mechanisms available to the child. Thus, while even the more 'learner-friendly' representations assumed by Tomasello could not be acquired by 'isolated association-making and induction', it is clear that young children are much more than simple associative learners, and come to the language-learning task with a potentially powerful (and species-specific) combination of intention-reading and pattern-finding skills. This combination of skills, which, Tomasello argues, is required to explain how children are able to learn words, morphemes and various kinds of semi-abstract or mixed constructions, also has the potential to explain the acquisition of abstract grammatical constructions, provided that these constructions are seen as complex communicative symbols, and not as contentless algebraic rules.

Tomasello's radical approach to the problem of language acquisition has a number of important strengths. The first of these is that it allows him to show how dependent current generativist analyses are on the so-called 'continuity assumption' (i.e. the assumption that we should seek to describe children's early knowledge in terms of the same theoretical vocabulary used by generative linguists to describe the adult system). As Tomasello points out, the continuity assumption is essentially a license to analyse the developmental data at such a high level of abstraction that any instances of correct use, however restricted, can be viewed as evidence for abstract linguistic knowledge, and any differences between children's and adults' language can be explained away in terms of one or more of a series of *ad hoc* assumptions about maturation, performance limitations or lexical learning. As such, it has resulted in arguments from the data that are so theory-dependent that they would not convince any but the initiated – for example, the claim that children's sensitivity to verb position across languages constitutes evidence for knowledge of verb movement (Wexler, 1994); and process models of the acquisition of particular systems that make little contact with the developmental data – for example, Pinker's (1984) semantic bootstrapping model of the acquisition of phrase structure rules. If one allows oneself to set aside the continuity assumption, however, one finds that children's initial use of a variety of grammatical and morphological systems (including basic word order patterns, tense and agreement marking, and sentential complement and relative clause constructions) is much more lexically-restricted than most generative accounts of children's language would seem to predict. Of course, it may be that children's underlying

knowledge is represented at a more abstract level than these features of the data suggest. However, assuming that this is necessarily the case is a very curious scientific strategy, which drastically reduces the testability of generativist accounts and precludes serious empirical analysis of the developmental data.

A second strength of Tomasello's approach is that it allows him to show how sidestepping traditional learnability analyses opens up the possibility of a much richer, more data-driven approach to the problem of language acquisition. Thus, rejecting the continuity assumption not only allows one to treat the nature of children's early representations as an empirical issue, but also to focus on questions such as the following: (1) How do children's representations change over time (e.g. what asymmetries do children show in their use of different instances of particular grammatical constructions at different points in development)? (2) How are restrictions in children's knowledge related to children's cognitive limitations or to the distributional properties of the language to which they are exposed (e.g. how are any asymmetries that are found related to differences in children's sensitivity to local and non-local cues, or to the frequency with which different instances of particular constructions occur in the input)? (3) How might this knowledge be shaped by differences in the kind of cues that are employed in different languages (e.g. what differences are there in the rate and manner in which children acquire grammatical systems in different languages as a function of the extent to which these systems rely on morphological cues such as case-markers or configurational cues such as word order)? It seems to me that, given the complexity of the language acquisition process, answers to questions such as these are ultimately going to be at least as informative as descriptions of the adult state (especially descriptions couched in terms of one particular set of formalisms). One of the most important contributions of Tomasello's analysis is therefore that it re-focuses our attention on these kinds of questions and shows us how few of them we are currently able to answer.

A third strength of Tomasello's approach is that it allows him to show how rejecting the traditional distinction between words and rules in favour of a more flexible, learner-friendly description of the adult state holds out the prospect of building more process-oriented models of the development of linguistic abstractions. Thus, Tomasello points out that, although not defined in terms of the kinds of entities to which they refer, paradigmatic categories such as Noun and Verb can be defined in terms of the way in which they combine with other elements in the utterance to perform particular communicative functions. For example, Nouns tend to combine with elements such as articles and number markers to package concepts into spatially-bounded entities that support referential functions in discourse, whereas Verbs tend to combine with elements such as tense and aspect

markers to package concepts into temporally-grounded processes that support predicative functions in discourse (Langacker, 1987). This raises the possibility that such categories could be constructed by grouping together linguistic items that combine in similar ways with other linguistic items to perform similar communicative functions. On the other hand, abstract constructions such as the transitive and ditransitive, although not tied to particular lexical items, tend to package information in ways that involve taking a particular perspective on some kind of scene and its participants (Goldberg, 1995). This raises the possibility that such constructions could be acquired by identifying commonalities in the overall meaning of different instances of a particular construction (e.g. that instances of the ditransitive construction tend to describe the transfer of 'objects' between 'people'), and analogizing across items that contribute to the overall meaning of the construction in the same way (e.g. across 'tellers', 'senders' and 'bringers' on the basis that they are all 'entities responsible for the act of transfer').

Of course, these proposals leave unanswered a multitude of questions about precisely how the relevant generalization processes would actually work, and how they would need to be constrained to achieve the right results across languages. However, they do suggest ways in which semantic, pragmatic and distributional information could, in principle, be used to build much more powerful linguistic representations than could be constructed on the basis of surface distributional information alone. They thus provide a framework for investigating the way in which children construct linguistic abstractions on the basis of the language to which they are exposed, and underline the need for more focused research on the kind of semantic, functional and distributional information to which children are sensitive at different stages of development, and the kind of mechanisms that would be required to integrate across these different sources of information successfully.

The most important weakness, as I see it, of Tomasello's analysis is his tendency to rely on rather idealized descriptions of the developmental data and hence to fail to fully integrate his ideas about the growing abstractness of children's representations with his ideas about the processes by which these representations are built. Thus, Tomasello tends to describe children's early grammatical development in terms of a progression from pivot schemas through constructional islands to abstract constructions. However, while this kind of description may provide a useful summary of the way in which children's language use becomes progressively more adult-like over time, it seems to me to be unlikely to do justice to the complexity of the representations that underlie children's language use at particular points in development. That is to say, although, as Tomasello argues, these representations are likely to be more lexically-restricted than

those of adults (in the sense that they reflect the gradual accumulation of knowledge about how particular lexical items pattern with respect to other lexical items to express particular meanings or perform particular communicative functions), they are also likely to be less lexically-restricted than is suggested by terms like PIVOT-SCHEMA and CONSTRUCTIONAL ISLAND (in the sense that they abstract to some degree across lexical items that pattern in similar ways to express similar meanings or perform similar functions from very early in the acquisition process).

In my view, what this inconsistency in Tomasello's position illustrates is the need for usage-based researchers to move beyond a focus on the item-specific nature of children's early language and develop descriptions of children's underlying representations that acknowledge their intermediate status as partial representations of semantic-distributional and functional-distributional regularities in the adult language. One way of doing this is to focus less on how much of children's correct production can be understood in terms of knowledge of lexically specific constructions and more on identifying differences in the productivity of children's and adults' use of particular systems after controlling for potentially confounding factors such as differences in lexical knowledge and sample size (e.g. Aguado-Orea, 2004). This kind of approach has the advantage that it not only rules out some of the most obvious objections to the claim that children's knowledge is more lexically specific than that of adults, but is also likely to provide more detailed information about precisely how children's use of particular systems differs from that of adults at particular points in development.

Another way forward is to focus less on similarities between the lexically specific patterning of children's early production and the distributional characteristics of the input and more on the pattern of error that children show in their use of different parts of particular grammatical systems (e.g. Rubino & Pine, 1998; Wilson, 2003). This kind of approach has the advantage that it can not only reveal theoretically interesting asymmetries in children's ability to use different parts of particular grammatical systems, but can also provide information about how children go beyond their input, and hence about the kind of generalizations that they have and have not made at particular points in development.

A third way forward is to focus less on the question of what the appropriate criteria are for attributing abstract knowledge to the child, and more on the question of what asymmetries in children's performance both within and across different paradigms tell us about the nature of their underlying knowledge (e.g. Fisher, 2002; Matthews, Lieven, Theakston & Tomasello, in press; Chang, Dell & Bock, in press). This kind of approach has the advantage of allowing us to move beyond the question of the extent to which comprehension and production studies under- or over-estimate

children's knowledge to the much more interesting questions of precisely what kind of semantic-distributional correspondences children have picked up at different points in development, how these semantic-distributional correspondences are represented, and what kind of learning mechanism would be required to construct such representations.

It seems to me that all of the above approaches have the potential to provide us with important insights into the way in which children build linguistic abstractions. However, they are only likely to do so if researchers are prepared to resist the temptation to impose adult formalisms on the developmental data and treat the nature of children's representations at particular points in development as an empirical question. The most important contribution of 'Constructing a Language' is in showing why it is necessary to do this, and in providing a theoretical and methodological framework within which it can be done.

## REFERENCES

- Aguado-Orea, J. J. (2004). *The acquisition of morpho-syntax in Spanish: implications for current theories of development*. Unpublished doctoral thesis. University of Nottingham.
- Chang, F. (2004). The development of the transitive construction: a connectionist account. Paper presented at the 29th Annual Boston University Conference on Language Development.
- Fisher, C. (2002). Structural limits on verb mapping: the role of abstract structure in 2.5-year-olds' interpretations of novel verbs. *Developmental Science* 5, 55–64.
- Goldberg, A. (1995). *Constructions: a construction grammar approach to argument structure*. Chicago: University of Chicago Press.
- Langacker, R. (1987). Nouns and verbs. *Language* 63, 53–94.
- Matthews, D., Lieven, E. V. M., Theakston, A. L. & Tomasello, M. (in press). The role of frequency in the acquisition of English word order. *Cognitive Development*.
- Pinker, S. (1984). Language learnability and language development.
- Rubino, R. B. & Pine, J. M. (1998). Subject–verb agreement in Brazilian Portuguese: what low error rates hide. *Journal of Child Language* 25, 35–59.
- Wexler, K. (1994). Optional infinitives, head movement and the economy of derivation in child grammar. In N. Hornstein & D. Lightfoot (eds), *Verb Movement*. Cambridge: CUP.
- Wilson, S. (2003). Lexically specific constructions in the acquisition of inflection in English. *Journal of Child Language* 30, 75–115.

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JEAN MATTER MANDLER, *The foundations of mind*. New York: Oxford University Press, 2004. Pp. 359. ISBN 0-19-517200-0.

Readers of this journal should consider reading *The Foundations of Mind* by Jean Mandler because, using Mandler's own words, 'Language must be



learned by infants who have no language' (102). Using a thorough review of relevant research and her own ideas about conceptual development, Mandler takes on some of the assumptions of the field and suggests a comprehensive way of thinking about how infants view the world, how they use this information to make sense of what is going on around them, and how they ultimately learn language. Mandler strips away the conflict of nature versus nurture, the Piagetian idea of a sensorimotor infant without thought, the assumption of innate conceptual mechanisms, and the popular notion of 'basic level' concepts in order to examine what research does and does not suggest about the concepts that underlie language. The reader is left with a thorough and extensive glimpse at the past, present, and future of the study of the conceptual underpinnings of language and thought.

Mandler's work helps to demonstrate that we have come a long way in the study of language acquisition and cognitive development. We no longer exclusively examine the structure of language devoid of semantics as we did in the ancient past (the late 1960's). Instead, we acknowledge the significance of the content and meaning of language – the concepts underlying the words – partially due to Lois Bloom's (1970) insistence on meaning in her dissertation and to the advent of the generative semanticists (e.g. Fillmore, 1968). Nor do we accept a purely sensorimotor stage of development as suggested by Piaget (1952), partly due to the wonderful research on how infants interpret events (e.g. Spelke, 1998). Mandler argues, in accord with much recent research on infant capabilities, that Piaget's view of infancy is implausible. Infants must do more than simply perceive and act on their environment; they must also be able to actively think about and analyse that environment. Accordingly, Mandler argues 'for the necessity of differentiating seeing (and acting) from thinking' (41).

While the debate on the relationship between language and thought continues (e.g. Gentner & Goldin-Meadow, 2003), Mandler argues convincingly that the study of language cannot take place without the consideration of meaning. She astutely adds that,

Sadly, psychologists have more or less abandoned the study of meaning in recent years ... due in part to the diversion of research to the study of the brain ... But the brain cannot tell us about meaning. That is the province of the mind, and if psychology does not pay attention to the way the mind processes meaning, it is in danger of losing its central core. (vii)

Because meaning is inseparable from language, Mandler proposes that any adequate model of language acquisition must explain two important aspects of the role of meaning in learning to talk. The first is how meaningful representations are formed in the first place. Models of language acquisition must include a plausible theory of how children create meaning

and form concepts. The second is how children use these representations to facilitate language learning. According to Mandler, 'Infants don't wait for language to begin to think' (119); instead, long before any language appears, infants are building the representational base onto which they can map language. Mandler's theory of PERCEPTUAL MEANING ANALYSIS and its resulting IMAGE SCHEMAS respond to both of these requirements and offer a masterful account of concept formation and, ultimately, the origins of language acquisition.

But what is this theory that Mandler proposes? Before we can truly understand her theory of concept formation and the role of meaningful representation in language, we must address its source. Derived from the work of cognitive linguists (e.g. Langacker, 1987), Mandler's theory of concept formation describes a way in which preverbal infants can redescribe perceptual information into an accessible, meaningful format (see also Karmiloff-Smith, 1992). As also argued by E. Gibson (1969), Mandler claims that infants actively perceive the world around them. Mandler differs from Gibson, however, in arguing that, through the process of perceptual meaning analysis, infants seek to understand and represent their world by forming image schemas. Gibson deemphasized the child's construction of meaning.

This is the most controversial aspect of Mandler's theory. She proposes that image schemas are schematic, analog representations that summarize spatial relations and movements in space. Image schemas are not images, *per se*, as they eliminate figural detail and the complexities of movement. Instead, they are redescribed fragments of perceptual information that represent an observed event in its most abstract, elemental form. Mandler proposes that the following image-schemas are present early in development: PATH, CONTAINMENT, SUPPORT, LINK, UP-DOWN, ABOVE-BELOW, ANIMATE MOTION, INANIMATE MOTION, SELF-MOTION, CAUSED MOTION, CAUSE-TO-MOVE-INANIMATE, SOURCE-PATH-GOAL, and AGENCY.

To illustrate image-schemas and their formation, consider the following example. A baby sees her mother move her bottle from the counter to the refrigerator to fill it with milk. Later that day, she sees her father move a toy from the playpen to her crib, and then a book from the floor to a bookshelf. All of these instances would be transformed into the image-schema of PATH, defined as the conceptualization of any object following any trajectory through space without taking into account the specific objects or trajectories involved. These analog representations of PATH can also be encoded in terms of their directionality (UP/DOWN) or in terms of AGENCY, in that they involve an animate object acting on an inanimate one. Schematic representations such as these transform the infant's daily perceptual experience into meaning. If we were to use old terminology coined by Gibson (1969), deriving meaning in this way contributes to the

‘reduction of uncertainty,’ or the ability to predict outcomes, a comforting skill in an ever-changing world.

The perceptual meaning analysis that results in image schemas provides infants with a way to represent perceptual information in an explicit and accessible format, thus enabling infants to think about both past and future events. Likewise, perceptual meaning analysis provides infants with meaningful representations that they can later analyse and combine to form concepts. In Mandler’s terminology, a concept refers to ‘declarative knowledge about object kinds and events that is potentially accessible to conscious thought’ (4). Thus according to Mandler, infants ascribe meaning to what they perceive (through perceptual meaning analysis) and that meaning, in turn, forms concepts.

Consider the concepts of animate versus inanimate. According to Mandler, infants learn through analysis of their perceptual experience that there are two kinds of things in the world – animate things and inanimate things. The primitive concept of animacy may consist of a cluster of image schemas, including ANIMATE MOTION (rhythmic, fluid, irregular paths of motion), SELF MOTION (onset of object motion initiated by the object itself), and LINK (when two entities or events behave contingently even though they are not in direct contact, as in the contingent social interactions of animate things). Animacy, a fundamental distinction made by all the world’s languages, has its roots in infants’ earliest event perception. Early work (Golinkoff, Harding, Carlson-Luden & Sexton, 1984) suggests that at least by 1;4, infants have worked out expectations for how inanimate objects should move. When shown a chair apparently moving itself (pulled by transparent plastic wire) babies showed surprise and sometimes fear. Surely, babies had seen chairs move before; what they hadn’t ever seen was a chair that seemed to initiate its own motion.

After articulating her theory and providing evidence in its support, Mandler finally arrives at the core of our interest in conceptual development: its role in language acquisition. Mandler argues that long before any language appears, through perceptual meaning analysis and the formation of image schemas, infants build the representational base onto which they can map language. Mandler dismisses the possibility that a word may be simply mapped onto an object with a particular perceptual appearance. As similarly suggested by Bloom (1993), Mandler proposes that words are mapped onto meaning, onto concepts. Perceptions of objects are interpreted by the infant, and it is the interpreted meaning – the preverbal concept – that then supports semantic learning.

According to Mandler, these preverbal concepts are generally global in nature (e.g. animate vs. inanimate), resulting in children’s overextension of their first words. For example, children may incorrectly map the term *dog* to their global concept of *animal* and therefore overextend their usage of the

word *dog* to refer to, say, cats and cows. However, global concepts of objects become refined as words are learned. Mandler explains, 'Learning differentiated labels for an undifferentiated concept such as animal or land animal surely helps expand the early conceptual system, nudging it toward the nuances that adult language conveys' (247). Thus according to Mandler, the relationship between concepts and words is interdependent: language both maps loosely onto preformed global concepts and is used to further refine and differentiate those concepts into the richly defined concepts of adults.

Mandler expands this position with the discussion of relational terms. Unlike object nouns, the packaging of relational words varies greatly across languages, offering the greatest potential for language to influence the growing conceptual system. For example, in English, the prepositions *in* and *on* convey CONTAINMENT and SUPPORT relations; however, in Korean these relations are conflated in very different ways using three verbs, *nohta*, *kkita*, and *nehta*. These and similar examples of cross-linguistic variation have led some researchers (e.g. Bowerman & Choi, 2001) to reject the notion of semantic primitives, suggesting instead that from the beginning, language directs attention to language-relevant relations, and thus helps build these particular concepts. Nevertheless, Mandler maintains her position, asserting that, 'whatever partitions a language proffers, they will be interpreted within the framework of the underlying meanings represented by nonverbal image schemas' (251). Babies don't wait for language to form concepts, a point attested to by the apparently normal conceptual development of children never exposed to language (Goldin-Meadow, 2003). Through perceptual meaning analysis and the formation of image schemas, infants (hearing or deaf) form essential, preverbal concepts of spatial relations. Our guess is that through language experience, they adapt their preverbal concepts into the specific packages that are delineated by their own language.

As an unexpected final point, Mandler extends the use of image schemas from semantic relations to grammatical ones. Here, Mandler argues that image schemas provide access into the learning of syntactical forms. Her argument is that, while 'many of the grammatical aspects of language seem impossibly abstract for the very young child to master, when the concepts that underlie them are analysed in terms of notions that children have already conceptualized, not only does the linguistic problem facing the child seem more tractable but also the types of errors that are made become more predictable' (279). According to Mandler, the notions of caused and uncaused actions, agents and patients, and goals are all both defining properties for many grammatical categories and also basic image-schematic notions. Consider, for example, the case of the distinction between transitive and intransitive verbs. Mandler suggests that as a result of their image schemas, infants come to the task of language acquisition already conceiving

of events in terms of their participants (e.g. one or two, ANIMATE vs. INANIMATE) and the relationship between them (e.g. CAUSED MOTION, LINK). Thus, to learn the distinction between transitive and intransitive verbs, for example, infants must simply recognize that certain structural patterns of linguistic input (transitive vs. intransitive frames) map onto particular image-schematic notions. According to Mandler, image schemas offer a foundation for both the meaning and the structure of language.

While Mandler's *Foundations of Mind* offers a masterful account of conceptual development and its relationship to language acquisition, we believe that her account of the development of language may be somewhat oversimplified. Although image schemas may be foundational to conceptual development, we must not underestimate the fact that the acquisition of language is its own problem space. Linguistic rules cannot be learned entirely from image-schema representations of events. For example, although the image-schematic representations of *give* and *donate* are very similar, the linguistic properties of these words differ. We can *give the library a book* but not *donate the library a book*. Dative alternation is but one example of a linguistic construct that must be learned over and above image schemas.

Similarly, while Mandler's story on cognitive development and conceptual primitives is brilliantly assembled and argued, years of verb learning research in our lab (e.g. Maguire, Golinkoff & Hirsh-Pasek, in press) has shown that children need more than just conceptual underpinnings to acquire their native language. Our research suggests – very much along the lines of Mandler's theory – that infants can detect changes in manners and paths in nonlinguistic events as early as 0;7; can form categories of invariant path across changes in manner by 1;1 and categories of invariant manner across changes in path by 1;3; and can form categories of manner across changes in agent and changes in rate by 0;10 (see Pulverman, Hirsh-Pasek, Golinkoff, Pruden & Salkind, in press, for a review). These preliminary findings suggest that toddlers may indeed possess the image-schematic representations and underlying event concepts necessary to learn the verbs of their language. Nonetheless, we have struggled to obtain actual verb learning in the lab. Ironically, we have shown that infants can form nonlinguistic categories with some of the very same stimuli we used (unsuccessfully) to promote verb learning. These conflicting results suggest that detecting the relations in events is one thing and learning to map language onto these relations is quite another! Verbs do not map transparently onto events despite their common conceptual core for a number of reasons, including the ambiguity around which aspect of an event a verb is labelling. So, while infants may perceive ANIMATE MOTION and PATH, when they hear a label they still must figure out which aspect of the animate agent's action (e.g. arms? legs? whole body?) the motion verb is labelling.

This is even more the case for mental verbs, such as *feel*, which describe events or states that cannot be seen. Thus, image-schematic representations of events are certainly necessary but not sufficient to account for the acquisition of verbs.

All this said, it does not take away from Mandler's basic thesis: human infants who learn language are constructing meaning from the outset, working on the content that will gain linguistic expression. This is a very important book, as it addresses (as Mandler always has) the very origins of knowledge and ultimately its relationship to the early stages of language development. We highly recommend it to JCL readers.

## REFERENCES

- Bloom, L. (1970). *Language development: form and function in emerging grammars*. Cambridge, MA: MIT Press.
- Bloom, L. (1993). *The transition from infancy to language: acquiring the power of expression*. New York: Cambridge University Press.
- Bowerman, M. & Choi, S. (2001). Shaping meanings for language: universal and language-specific in the acquisition of spatial semantic categories. In M. Bowerman & S. C. Levinson (eds), *Language acquisition and conceptual development*. Cambridge, England: CUP.
- Fillmore, C. J. (1968). The case for case. In E. Bach & R. T. Harms (eds), *Universals in linguistic theory*. New York: Holt, Rinehart & Winston.
- Gentner, D. & Goldin-Meadow, S. (eds) (2003). *Language in mind: advances in the study of language and thought*. Cambridge, MA: MIT Press.
- Gibson, E. (1969). *Principles of perceptual learning and development*. New York: Appleton.
- Goldin-Meadow, S. (2003). *The resilience of language: what gesture creation in deaf children can tell us about how all children learn language*. New York: Psychology Press.
- Golinkoff, R. M., Harding, C. G., Carlson-Luden, V. & Sexton, M. E. (1984). The infant's perception of causal events: the distinction between animate and inanimate objects. In L. P. Lipsitt (ed.), *Advances in infancy research*. Norwood, NJ: Ablex.
- Karmiloff-Smith, A. (1992). *Beyond modularity: a developmental perspective on cognitive science*. Cambridge, MA: MIT Press.
- Langacker, R. W. (1987). *Foundations of cognitive grammar* (Vol. I). Stanford, CA: Stanford University Press.
- Maguire, M. J., Hirsh-Pasek, K. & Golinkoff, R. M. (in press). A unified theory of word learning: putting verb acquisition in context. In K. Hirsh-Pasek & R. Golinkoff (eds), *Action meets verb: how children learn verbs*. New York: Oxford University Press.
- Piaget, J. (1952). *The origins of intelligence in the child*. New York: International Universities Press.
- Pulverman, R., Hirsh-Pasek, K., Golinkoff, R. M., Pruden, S. M. & Salkind, S. J. (in press). Conceptual foundations for verb learning: celebrating the event. In K. Hirsh-Pasek & R. Golinkoff (eds), *Action meets verb: how children learn verbs*. New York: Oxford University Press.
- Spelke, E. S. (1998). Nativism, empiricism, and the origins of knowledge. *Psychological Review* 99, 605–32.

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