Online Supplement

Communicative intentions of child-directed speech in three different learning environments

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Coding Scheme

The coding scheme used to identify communicative intentions was guided by a list of content types that are typically contained in the different intention categories. This list was used to guide coding. If an utterance contained content listed for a certain category, the utterance would be coded accordingly, provided the content would be part of the focus of the utterance. Tables S1, S2 and S3 provide an overview of the type of content words for cognitive, imperative and socioemotional intentions respectively.

Table S1. Content typically contained in utterances with cognitive intentions.

Type of content	Examples
animal names	cat, dog, doggy, puppy, horse, cow
animal sounds	meow, woof
object labels	toys, computer, television, lamp
clothing items	trousers, jumper, t-shirt, hat
cutlery items	spoon, fork, plate
food items	rice, bread, candy
drink items	water, lemonade, milk
furniture	table, chair, sofa, bed
household items	toaster, vacuum cleaner, broom
money items	penny, coin, cent, Euro
transportation means	car, bicycle, bus, truck
quantifyers	numbers, few, many, all, none
object properties	colors, size
relational attributes	same, different
spatial relations	left, right, on, under, front
weather conditions	sunny, cold, hot
locations	at home, shops, kitchen
time indicators	weekdays, months, hours, tomorrow, yesterday
abstract/relational verbs	to think, to count, to read, to be
what/where/which/when/why questions	what is that? where is the cat?

Utterances are categorized with a cognitive intention when the focus of the utterance is about providing (non-social) information about things to the infant, or eliciting that type of information. They are often declaratives, such as "look, there is a doggy" or "this is a red firetruck", but it could also be a question like "where is the blue block?". Utterances with cognitive intentions would provide the child opportunities to learn object labels, spatial relations, object properties, temporal relations and so forth. Excluded are labels and relations that refer to persons and specific animals, but also

specific locations that have a social functions, such as a school; these are categorized to have socioemotional intentions.

Table S2. Content typically contained in utterances with imperative intentions.

Type of content	Examples
physical actions verbs	to walk, to turn around, to stand up, to brush teeth,
few what/where questions	what are you doing? where are you going?
cautions	be careful, that is impossible
encouragements	try like this, you can do it

Utterances are categorized as imperatives, not only when they are imperatives in the true sense, like "give that to me", "sit on your chair", "bring that to aunt Annie", but also questions or comments about a physical action, such as "where are you going?", "you are walking", "do it like this", "you try" or cautions like "be careful!".

Table S3. Content typically contained in utterances with socioemotional intentions.

Type of content	Examples
person names	John, Mary
person labels/professions	baby, babysitter, baker, cowboy, teacher
kinship relations	mummy, daddy, sister, aunt, grandmother
pet's names	Fido, Tinkerbell
greetings	hello, bye-bye
possessive pronouns	mine, yours, myself
relative pronouns	who, whose
social verbs	to help, to call (on phone), to talk, to watch, to listen
social actions	clapping hands, singing, dancing
social events	party, camping, picknick, dinner
social locations	school, church, circus
ritual play utterances	I am gonna catch you, peek-a-boo
politeness	please
exclamations	auch! ai! yummy! uh oh!
emotional states	sad, happy, crying, laughing
physiological states	hungry, thirsty, tired
affections	to love, to hug, to kiss
affective adjectives	cute, friendly

Utterances are categorized as socioemotional intentions when its focus contains clear social or socioemotional content. These include referentials to persons or pets, greetings, actions and locations with a clear social functions, forms of politeness, emotional states and affections. Utterances that would often be categorized as imperatives, such as "Call daddy!", "Listen to me!", "Come on, let's dance" or "Give mummy a kiss", were categorized by us as socioemotionals, as they have a clear social intention, and not as imperatives.

Utterances are categorized with more than one intention, if its focus apply to more categories. For instance, the utterance "bring that bottle to your sister" contains a physical imperative activity "to bring", it contains an object label "that bottle" and a kinship relation "your sister", and all these are in focus. As a result, it would be categorized as cognitive, imperative and socioemotional.