

## NAMING THINGS FOR CHILDREN: THE BASIC LEVEL IS NOT AD HOC

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Some think that naming matters, others think it less important. To young children, however, naming is crucial. In particular, the naming of things by their parents is crucial. Names (words) that the children make up themselves tend to be not as well, and certainly not as widely, understood. Children rely on their parents for naming that is both sufficiently understandable and sufficiently consistent that the child can learn from it. This paper addresses a small portion of the issue of naming conventions employed by parents of young children. Section 1 reviews the literature on basic-level and ad hoc categories and on 'the cooperative mother'. Section 2 discusses the methodology of this study, speaking to the basic approach, categorization of examples, and the data itself. Section 3 presents evidence supporting the extent and the limits of 'the cooperative mother', with the discussion in Section 4. Section 5 presents the conclusions at this stage of the work and suggests some avenues for further research.

'Wherefore God also hath highly exalted Him,  
and given Him a name which is above every name:  
that at the name of Jesus every knee should bow.' (Philippians 2:9-10)

'What's in a name? That which we call a rose  
By any other name would smell as sweet.'  
(*Romeo and Juliet*, II:2.43)

## BACKGROUND

1.1. BASIC-LEVEL CATEGORIES. Roger Brown, in his 1958 article 'How shall a thing be called?', states that 'the name given a thing by an adult for a child is determined by the frequency with which various names have been applied to such things in the experience of the particular adult'; the most frequent term in the adult's experience is the one used to name or label the thing for a child (15). While 'many things are reliably given the same name by the whole community' (16), individual differences do come into play. Brown goes on to argue that 'the most common name is at the level of usual utility' and that 'the names provided by parents for children anticipate the functional structure of the child's world'. As he also notes, the latter two principles—'usual utility' and 'functional structure of the child's world'—do not always yield identical results. For example, what would be simply a chair for another adult might be named *the good chair* for a child, differentiated from other chairs in that it is not to be sat upon (17). The frequency notion, while untestable, seems intuitively correct, and the utility notion would seem to hold as far as it goes; not everything named for children is necessarily 'utilized', even in their parents' worlds (e.g. wild animals).<sup>1</sup>

Brown's student, Eleanor Rosch, and especially her student, Carolyn Mervis, have done extensive field work, psycholinguistic experiments, and diary studies to probe and to expand upon Brown's seminal ideas (e.g. Rosch 1973, Rosch & Mervis 1975, Rosch et al. 1976, Mervis & Rosch 1981, Mervis 1982, Mervis 1984, Mervis & Long 1987, Mervis et al. 1992, Mervis MS, Mervis & Bertrand MS). In this process, the notion of basic-level category—'more fundamental psychologically than categories at other hierarchical levels' (Mervis 1984:341)—has become well established, as has the notion that things are named for children at this basic level. The basic level is defined as 'the level at which within-category similarity is maximal relative to between-category similarity'. Basic-level categories of objects are significantly better than superordinate categories, and not significantly different from subordinate categories, with regard to 'clusters of co-occurring attributes common to the category, sequences of motor movements common to typical use or interaction with the object, objective similarity in the shape of the object, and identifiability of an average shape of objects in the class' (Rosch et al. 1976:428). In other words, when moving in the categorization process from the universal ('stuff') to the particular ('this unique item'), the basic-level category is the one that provides both the most new information and the most information for the fewest number of categories. Mervis also states that 'the principles governing the determination of which categories are basic are universal, but the actual categories that serve as basic-level categories vary, depending on a person's knowledge of the relevant domain', while citing Rosch et al. 1976 and Dougherty 1978 (1984:340). Precise instances and labels for basic-level categories thus vary somewhat among individuals, even among individual adults, and presumably vary significantly between adults and children as groups. There is thus a rather broad agreement in the literature regarding the nature of basic-level categories and their conventional use in naming things for children. The present paper takes all of this as given.

<sup>1</sup> I choose 'parent(s)' over caretaker(s)' both because it is a more human word and because parents are primary in the sense that other caretakers stand *in loco parentis*. Those who wish may read parent(s)' as 'parent(s), non-parental caretaker(s), and other responsible adult(s)'.

**1.2. THE COOPERATIVE MOTHER.** Mervis provides significant experimental support for her further assumption (drawn from Bell 1964, Bell & Harper 1977, Jones 1977, Jones 1979, and Jones 1980) 'that mothers of young, normally developing children tend to follow their children's initiatives when interacting with their children' while mothers of young, handicapped children tend not to (Mervis 1984:340). As I cannot find that Mervis has ever named this idea, I will call it the notion of 'the cooperative mother'. The relevance of 'the cooperative mother' for naming and categorization is that mothers have a notion of appropriate child categories and will confirm and cooperate with their ('normal') child's use or naming of such categories, even in the face of conflict with adult basic-level categories. Mothers will not cooperate, however, with category use or naming perceived to be outside the range of 'normal' child categories.

### 1.3. AD HOC CATEGORIES.

'With a name like yours, you might be any shape, almost.'  
(Lewis Carroll, *Through the looking glass*, Chap. 6)

Ad hoc categories are described by George Lakoff (citing Barsalou 1983, 1984) as 'not conventional or fixed but rather ... made up on the fly for some immediate purpose' (1987:45). Barsalou himself is rather more temperate, stating that 'people construct ad hoc categories to achieve goals' (1983:211) and defining ad hoc categories as 'sets that (1) violate correlational structure and (2) are usually not thought of by most people' (214). The precise time frame within which the ad hoc category is constructed is thus less important to Barsalou than its other characteristics, although he does note that 'some ad hoc categories may be processed so frequently that ... [they] become well established in memory' and lose their ad hoc status (224). He provides no name for formerly ad hoc categories.

Ad hoc categories differ strongly from basic-level categories in their 'violation of correlational structure'. Items in an ad hoc category do not, as a rule, share Brown's 'usual utility' (1958:16), nor do they exhibit the basic-level characteristics of common attributes, common motor movements, and similarity of shape described by Rosch et al. (1976:428). The ad hoc category 'things to sell at a garage sale', for example, can be formed to achieve the goal of 'selling unwanted possessions' (Barsalou 1983:211). It may contain things as widely disparate on the basic-level as an end table, a can opener, a cashmere sweater, a paperback book, a fishing lure, a crystal candlestick, ... you name it.

Ad hoc categories also differ from basic-level categories in being 'usually not thought of by most people'. Although I would term this 'description' rather than 'definition', it is not nearly so vague as it seems. Seeing a chair and having the basic-level category chair come to mind is a very common phenomenon; not so for the large number of ad hoc categories to which the chair may equally well (if not equally saliently) belong. As Barsalou points out (223):

'Because ad hoc categories are so specialized, it may be optimal that perceiving an entity does not activate all the ad hoc categories to which it belongs. Seeing a chair and having categories such as "emergency firewood," "fits in the trunk of a car," and "used to prop doors open" come to mind would be highly distracting when these categories are irrelevant. Ad hoc categories should come to mind only when primed by current goals.'

**1.4. AIMS.** It seems likely that ad hoc categories do not suddenly appear in the mature speaker's mind but are present from early childhood. Prior to explicit naming of such categories by the child, the categories themselves can be demonstrated nonverbally, as Mervis discusses (1984:344):

'A child cannot demonstrate his or her categories nonverbally until he or she enters the fifth stage of the sensorimotor period. Prior to this stage, according to Piaget (e.g., 1954), children tend to interact with all objects in the same manner—for example, by looking, mouthing, shaking, or banging. The child is interested in his or her own actions, rather than in the properties of the object with which he or she is interacting. Thus, the child provides no clues to the mother concerning his or her categories. The main change that occurs during the fifth stage is the development of an interest in objects for their own sake. During this stage, children actively explore objects, and in so doing discover many of the characteristic functions of specific types of objects, and the form attributes that predict these functions. The child therefore begins to treat different types of objects differentially.' (Piaget 1954, Uzgiris & Hunt 1975)

I propose that young children do have ad hoc categories, e.g. the category 'things to take apart'. All normal two-year-olds (and many who are not) want and try to take things apart, most of which either don't come apart or are preferred by their parents in one piece; they seem to be working very hard on probing the limits of this ad hoc category while meeting the goal of exploring manipulable objects. The child's category may include such marginal items as Mommy's jewelry box and Daddy's fountain pen as well as items more central to the category 'things to take apart' such as stacking toys and picture puzzles. It is also likely to include items designed for very different purposes, such as hard bound books, potted plants, stuffed animals, and Christmas trees. The ad hoc category 'things to take apart' would seem to be rather a durable one, evolving over time as the child learns to exclude some items, either through punishment or through trial-and-error, and perhaps to include others, as his or her skills develop.

The ad hoc category 'things to do in this room' may be of similarly long duration and evolution, as when 'this room' means 'the kitchen' or 'my bedroom', or it may satisfy Lakoff's 'on the fly' characterization, as when visiting a laboratory playroom only once or twice. Again, the child's category is going to differ markedly from the adult's 'things to do in this room', even when the two of them are in the same place at the same time.

I came to this study, then, with knowledge of four sorts of categories: basic-level categories, superordinate categories (of several levels), subordinate categories (again of several levels), and ad hoc categories. Of these, the first three comprise a congruent system and the fourth, ad hoc categories, cuts orthogonally across that system. I am interested in how parents name things for children with regard to these four categories, in how parents may cooperate with, limit, and extend their children's initiatives in categorization.

## METHODOLOGY

**2.1. BASIC APPROACH.** I began to learn, with my first pass on the data, that naming is much more complicated than naming proper or initial naming, to wit, the standard 'That/This is an X,' with or without a preceding *What's that/this?* by either parent or child. Often, for instance, the child will label an object, sometimes specifically naming it, other times referencing it; in such cases, the parent's response is also a naming, wherever it lies on the continuum from null response through *Mmhm* and *Yes, that's an X* to *No, that isn't an X, it's a Y*. This second sort of naming could be called responsive naming. The second order of complication lies in the fact that we 'name' everything—objects, actions, and qualities—not just objects. We tell children what we are doing (e.g. *cooking, working*) and we also tell them what they are doing, starting with *Oh, look, (s)he's smiling!* and the like. We teach children colors, shapes, and textures, and freely correct their comments on qualities when we think they are mistaken. While most of the discussion on basic-level naming has been on the naming of objects, I focus freely on differential naming—initial and responsive—across types of categories, regardless of the sort of thing named.

The third order of complication is that naming does not occur in discrete discourse segments with only one instance, or even one type of naming, occurring in a single segment. Rather, naming occurs in what I will call naming episodes. A naming episode is a discourse segment, a series of turns, during which one or more new foci of interest are introduced. There may be multiple instances of naming the same thing or several things may be named, sometimes in quick succession and other times in an interwoven fashion. In short, the data are messy. Thus, while I trust that the categorization of the data is clear and telling, the organization of the data is episodic, relying upon the natural discourse unity of conversational topic rather than on any artificially imposed unity of naming type.

One final adjustment in my approach, based on my coming from a relatively experimental background, is that my initial idea of using all the data, properly categorized and discussed, is simply untenable. The paper would become both repetitious and excessively long. Instead, I start with the ideas and select supporting data from each child while keeping an eye out for data that contradict my hypotheses. I mention this, which I realize is probably a normal approach with conversational data, because it still seems awkward to me.

**2.2. CATEGORIZATION OF EXAMPLES.** My categorization scheme for parental naming was adapted from the categorization of maternal feedback in Kathryn Post's article on negative evidence (1994).<sup>2</sup> Parental naming can be either initial or responsive, explicit or implicit. For the purposes of this paper, the former distinction is the more salient.

Parental naming is categorized as 'initial' or 'responsive' based on initiative: the parent is either (in the process of) initiating a new topic ('initial') or is responding to something said by the child ('responsive').<sup>3</sup> The two tasks of initial naming and responsive naming are quite different. Initial naming starts from the parent's idea, modifies it (perhaps) for presentation to the child, and then produces the name or word. Responsive naming, however, starts from the child's word; note the contrast not only between 'parent's' and 'child's', but also between 'idea' and 'word'. Speaking loosely, the child's word (in that particular utterance) then either 'succeeds',<sup>4</sup> i.e. freely furthers its (apparent) communicative purpose, or 'fails' to some degree, i.e. triggers a consciousness of the 'word' itself in the parent's mind.<sup>5</sup> The parent then goes through a process of deciding (whether and) how to combine furthering the

<sup>2</sup> 'Adapted from' rather loosely. It would perhaps be better to say 'inspired by'.

<sup>3</sup> I limit the child's initiative to speech, while aware that gesture and activity are also initiatives in this sense, for two reasons: (a) the children in these data all speak freely, and (b) I am studying, rather than social dynamics or even the more narrow topic of how children learn to name, the still narrower topic of how parents name things for children.

<sup>4</sup> The rest of this sentence holds true, of course, for every 'word' in every utterance; it holds true on the levels of semantics, syntax, phonology, and phonetics; and it also holds true for grammatical constructions, discourse structure, et cetera. A communicative challenge for the effectiveness of negative evidence.

<sup>5</sup> I make no attempt to describe the causes of 'failure', the degrees of 'consciousness', or the nature of the process by which the parent decides how to respond. I am also ignoring those 'successes' from the parent's point of view which are failures for the child because she is misunderstood.

conversation per se with expressing some response to the child's 'failure', and then produces the name or word. The responsive naming task, in short, starts with the child rather than with the parent and is altogether more complex than the initial naming task.

Parental naming can also be categorized as either explicit or implicit. Explicit naming is some version of *That's (an) X*. Implicit naming covers a much wider range—from the parent's response to the child's naming or reference, which may range in turn from silence to a lengthy and enthusiastic few sentences, to the parent's initial reference to something, often designed to direct the child's attention. I have thus set up a two-by-two grid for categorizing parental naming, as shown in Table 1; instances of all types occur.

	<u>Initial</u>	<u>Responsive</u>
Explicit	yes	yes
Implicit	yes	yes

TABLE 1. Categorization of parental naming.

Responsive naming, whether explicit or implicit, may be further categorized as either affirmative or corrective. Parental naming responses beginning with 'yes' are generally affirmative, as are exact or extended repetitions. Corrective responsive naming either begins with a 'no' or else expands, contracts, or contradicts the child's label. Instances of all these types occur in the data. Note that what we are used to thinking of as an expansion, meaning parental expansion of a child's utterance, may or may not be an expansion of the child's naming label per se. The present paper uses the term 'expansion' in the narrower sense, with regard only to naming.

**2.3. THE DATA.** The data used in this paper were gathered by Jean Berko Gleason and her staff on twenty-four children in the mid-1970s (Berko Gleason 1980, Menn & Berko Gleason 1986); they are drawn (with thanks) from the CHILDES database (MacWhinney & Snow 1990). Video tapes were made available by Lise Menn. The Berko Gleason database covers children aged 2;1 through 5;2. All of the children in the Berko Gleason study spent half an hour in her laboratory playroom with each parent. There were three potential activities, among which the parents were asked to divide their time:

- (a) A wooden car, about 15 inches long, with wooden people and plastic tools, that was held together by plastic nuts and bolts and could therefore be taken apart into quite a number of pieces.
- (b) A bookshelf containing a cash register (with play money), a number of empty and 'pretend' food containers, some real food, and an array of dishes and doll-sized furniture for playing store and/or house.
- (c) A picture-only story book.

For some reason, perhaps my inability to see the book myself (even in the videos), I don't feel comfortable with the data from the story scenario and have simply eliminated it from my consideration, along with other naming episodes with unidentifiable referents. The data in this paper are thus drawn primarily from the car and store scenarios.

The four children in the present study are the four youngest children for whom video tapes were readily available. As it happens, all of these children had their first recorded playroom visit with their mothers; this study uses the initial playroom sessions, with mothers only, to reduce the number of variables in the study. The children's code names, ages, and mean length of utterance (MLUs) as calculated by CLAN (MacWhinney 1991) are shown in Table 2. While the two boys are a little older than the girls, the two girls have slightly higher MLUs. I am thus not able to say anything meaningful about differences between boys and girls, but I do have a roughly balanced sample.

<u>Code Name</u>	<u>Age</u>	<u>MLU</u>
Nanette	2;1.4	2.988
Patricia	2;5.9	3.219
Martin	2;5.26	2.324
Guy	3;0.20	2.986

TABLE 2. Children's ages and MLUs.

Transcript passages are retyped from the CHILDES database and edited for readability. In a few instances, transcriber errors have been revised; I have also added a variety of bracketed ('[...]') comments. '/' indicates a backup by the speaker, with or without revision; '...' either means that a sentence continues with material not related to the naming at hand, or marks turns of untranscribed speech. The naming words and phrases discussed are underlined.

## EVIDENCE

**3.1. EXTENT OF THE COOPERATIVE MOTHER.** The first set of data was chosen to demonstrate the extent of the mother's cooperation in naming with reference to a single category—car. From the naming strategies used, I deduce that all the children were familiar with the category 'car' prior to their lab visits. The data below comprise the first dyadic mentions of the car in each transcript, together with pertinent further mentions. I have arranged the naming episodes roughly from most child-like or child-oriented to most adult-like or neutral, while keeping each child's episodes together.

**3.1.1. MARTIN** is wandering around the playroom at the beginning of both of the two naming episodes, while his mother attempts to attract his attention to the car.

- MOT: Come here, Martin.  
 MOT: Ya want me to show you how this works?  
 CHI: Na.  
 MOT: You know what this is?  
 MOT: It's like a workbench.  
 MOT: It looks like a workbench, only it's a car.  
 MOT: Come here, I'll show you.  
 ...  
 MOT: Let me show you something.  
 MOT: Do you know what this is?  
 CHI: xxx car xxx.  
 CHI: What's this?  
 CHI: xxx.  
 MOT: You wanna play with this car?  
 MOT: You want me to show you how it works?

Martin's mother at the first completely abandons the adult categorization 'car' in favor of anticipating 'the functional structure of the child's world' (Brown 1958:16). When Martin makes no response to *this*, she says *it's like a workbench*—apparently a favorite toy. Then she temporizes a bit, saying that *It looks like a workbench*, only then going on to name it explicitly: *It's a car*. She would almost certainly never categorized the car this way for an adult; rather, she is cooperating with Martin's presumed functional categorization. This is striking evidence for the cooperative mother.

**3.1.2. NANETTE** and her mother have just entered the playroom at the beginning of the first naming episode. The second and third episodes occur when Nanette is wandering around the room and the fourth while the two of them are playing with the car.

- MOT: We can read a story.  
 MOT: And we can play with a special car that you can take apart.  
 MOT: And we can play store.  
 MOT: Which would you like to do first?  
 ...  
 MOT: Would you like to play with the car or have a story first?  
 CHI: Car.  
 MOT: You wanna play with the car first?  
 ...  
 MOT: Do you wanna play with this little car?  
 CHI: Yeah.  
 MOT: Okay, have you seen a car like this before?  
 CHI: Yeah. [With her high arching intonation that I think means 'no'.]  
 MOT: Oh, you know what they call this?  
 MOT: They call this a convertible, because it doesn't have a top.  
 MOT: See? There's no top on it?  
 ...  
 CHI: xxx I better fix my car myself.  
 MOT: Okay, you can fix it yourself ...

A whole series of references is initiated in line 3 by the mother's saying, *a special car that you can take apart*. Nanette's mother uses basic-level nouns for the other two activities—*story* and *store*—but an 8-word, 10-syllable phrase for the car. Several phenomena are manifest in this sequence, aside from the very practical process of determining which activity to do first and then doing it. It seems clear, for instance, that Nanette is already familiar with 'story' and 'car' and 'store', as well as a number of other terms; she already has those basic-level categories in

some form. The long initial phrase-reference, followed by numerous short references, is much like the creation and utilization of a temporary negotiated meaning, as often found in adult-adult conversation. This is a technique well beyond Nanette's present productive competence, but one from which she may well be able to learn. I am most interested, however, in the parent's use and delineation of categories.

Nanette's mother does not go so far afield as Martin's mother does; she stays within the category car from the very beginning, but places this car out on the periphery of the category by initial, explicit naming as a *special car that you can take apart*. In the second episode, which comes shortly thereafter, she refers to it simply as *the car* and responds to Nanette's car with an affirming exact repetition; the child's utterance is expanded, but not the naming per se.

Later on, again attempting to focus Nanette's attention on the car, her mother initiates a naming episode with *this little car*. I find this interesting because, at 15 inches or so, the car is largeish among the toy cars in my experience. Nanette's mother may have meant *little* literally; more likely, she was using it either as an attractive diminutive or to get Nanette to look toward her and down, as she was playing with the car on the floor and Nanette was looking all around the room.

Then Nanette's mother again places the car on the periphery of the category car by saying, *Oh, you know what they call this?* This must have been rather a strange experience for Nanette. Of course she knows what they call it; it's a car, as she has already made clear she knows. So, what is going on? And, why is Mother saying *what they call this* rather than 'what this is'? Nanette wisely keeps silent. The mother then answers her own question with another explicit naming: *They call this a convertible, because it doesn't have a top*. Here is the introduction, probably for the first time, of the particular subordinate category 'convertible', together with a child's level description of the salient characteristic for that subordinate category. This car isn't out on the periphery of 'car' just because you can take it apart, which might be true of a toy anything, but also because it is in a particular subordinate category. But notice that her mother does not hold Nanette to the adult categorization by attempting to elicit 'convertible'. Moreover, when Nanette later refers to it as *my car*, which it isn't, her mother makes a responsive, implicit affirmative by saying *Okay* and then using the referential pronoun *it*—not an exact repetition, but not a correction either.

3.1.3. GUY and his mother have played with the store items for some time; they are now trying to select the next activity.

- MOT: Well, in / in box number one is a story book which I can read to you.  
 MOT: And in box number two is a play car.  
 MOT: What would you like?  
 CHI: The play car. [slight stress on 'play']  
 MOT: Alright.  
 CHI: Play car? [significant stress on 'car']  
 MOT: Yeah. [going over to the counter to get the car]  
 MOT: Remember the car that Sandy and Matty got for you?  
 MOT: It's like that one, only it's much bigger. [getting car out of the box]  
 CHI: Bring it down.  
 MOT: Okay.

Guy's mother's initial reference is to a *play car*. Again, this seems to be placing the car, if not out on the periphery, at least somewhat off center within the category 'car'. Given that they're in a playroom and that the car is in a cardboard box, the car in question is certainly a toy, rather than a 'real', car; but Guy's mother says *play car* rather than 'car' and, which may or may not be unusual for her, *play car* rather than 'toy car'. Note that this is also in contrast to the investigator's term a *take-apart car*, which is in the transcript, addressed to the mother, but not on video. Guy then says *The play car* and *Play car?*, with the differential stress as described, to both of which his mother makes affirmative responses. She then again differentiates this car from the general run of cars first by associating it with a particular other car that Guy owns (*It's like that one*) and then by distancing it even from that other car (*only it's much bigger*). She appears to be shaping her categorization of the car to fit precisely into Guy's world.

3.1.4. PATRICIA and her mother have entered the playroom just before the beginning of the first naming episode; at the beginning of the second, Patricia has been distracted from playing with the car by catching sight of the covered bookcase.

- CHI: xxx can I play with this? [bending toward and touching car]  
 MOT: Okay. What?  
 CHI: What is this? [not clear whether car or car part is meant]  
 MOT: What is it?  
 MOT: Well, why don't you take it apart and see?  
 CHI: This can't take off.  
 MOT: Huh?

- MOT: Well, see what comes apart.  
 MOT: Have you ever seen that toy before?  
 ...  
 CHI: What is this? [looking at the bookcase 'store']  
 MOT: What is this?  
 MOT: This is something else.  
 MOT: Why don't we fix the car first?  
 MOT: Okay?

Patricia is the only child among these four to notice the car before her mother mentions it. She asks if she can play with *this*, and the remaining references in the first episode are also pronominal (if, indeed, they refer to the car at all), except for a single *that toy* from the mother. The only uses of the word 'car' occur later, when Patricia's mother is trying to bring Patricia's attention back to the car (last episode above), and later still while they're actually playing with it (referential rather than naming; data not shown). At no point does Patricia's mother either explicitly name the car or attempt to elicit a name for the car from Patricia. This is a relatively adult-like series of transactions, one in which the mother's cooperation does not take her far afield at all. Notice, however, that Patricia's mother is still being a cooperative mother; she neither attempts to drag Patricia back to a more primitive functional categorization scheme (e.g. 'workbench') nor tries to push her forward into a subordinate scheme (e.g. 'take-apart convertible'). She is content to stay (with her child) at the basic level.

**3.1.5. SUMMARY.** The data in §3.1 suggest that the cooperative mother names and categorizes differently as her child's categories change over time. This seems a logical conclusion to draw from the car data discussed above, even though the data were single instances from four different children. The conclusion also fits in with our world knowledge; fifty-year-old mothers are not still telling their thirty-year-old children that toy cars are like workbenches.

**3.2. LIMITS OF THE COOPERATIVE MOTHER.** The second set of data, on different topics for each of the children, illustrates the limits to the cooperative mother's cooperation. The cooperative mother is not a doormat; she does not accept the rule of 'anything goes'.

**3.2.1. MARTIN and his mother have been playing with the car for some time.**

- MOT: Where do you think these people go? [indicating wooden peg figures]  
 MOT: Where do they sit?  
 CHI: xxx these go.  
 CHI: xxx driving. [placing female figure on left of seat]  
 MOT: He's driving? [stress on he]  
 CHI: Yeah.  
 MOT: Who's driving? [stress on who]  
 CHI: This man is drive. [stress on man]  
 MOT: This man is driving? [stress on man; exaggerated question intonation]  
 MOT: I think that's a lady.  
 CHI: This a boy? [picking up male peg figure]  
 MOT: That's a boy.  
 MOT: Right.  
 CHI: Eh hm this man's drive. [back to female peg figure, now on left of seat]  
 MOT: That's a girl, but she's driving.  
 CHI: xxx drive? [moving figures around, I can't tell exactly how]  
 MOT: Hmm.  
 CHI: xxx drive? [touching female peg figure, now on right of seat]  
 MOT: Is she driving?  
 CHI: Her drive?  
 MOT: Well, you tell me.  
 MOT: Do you want her to drive?  
 CHI: Yeah.  
 MOT: Okay, where does she sit?  
 CHI: Here xxx here. [pointing to right of seat]  
 MOT: Is that where the driver sits? [stress on that; exaggerated question intonation]

In the scene with Martin and his mother, they are placing the wooden peg figures back in the car. The two pegs are shaped alike, as far as I can tell from the video, but are painted differently to show that one is a male and the other a female. I am not going to discuss this episode turn-by-turn, as it is rather lengthy. The extent and the limits of the mother's cooperation, however, are quite clear. She cooperates, for instance, with Martin's abolition of the age/maturity distinction, accepting Martin's free alternation of *boy* and *man*, even to the extent of herself explicitly

naming the female peg figure both *lady* and *girl*. Martin's mother also cooperates with his ungrammatical use of *her* for 'she', even framing her next question to echo *her* and *drive*. She does not, however, cooperate with Martin's abolition of the gender distinction, correcting it every time. Moreover, she makes a major issue (without ever explaining it) of where the driver sits, even though the steering wheel on this car is in the exact middle of the dashboard. Neither of the figures fits exactly behind the steering wheel; each is off to one side or the other. 'Which side of a car the driver sits on' is not a basic-level category; it is, however, a piece of cultural knowledge both completely irrelevant to a two-year-old, who will not be driving for some thirteen years, and underspecified in this particular car with its centered steering wheel. Yet Martin's mother does not cooperate with his world-view at all in this instance.

### 3.2.2. NANETTE has been distracted from playing with the car.

- CHI: Letters. [pointing to large, colored numbers on the wall]  
 MOT: What?  
 CHI: Le- / letters.  
 MOT: No, those aren't letters.  
 MOT: What / Look again.  
 MOT: See if you can see what those are.  
 CHI: One, two, three, four. [pointing to various numbers; see discussion below]  
 MOT: That's right.  
 MOT: Those are numbers.

The number-naming episode occurs when Nanette is wandering about the room while her mother is trying to get her to settle down for the story. Figure 1 portrays schematically the section of wall on which Nanette is commenting. The large, bold-face numbers represent what was on the wall; the numbers were actually at different angles, and part of the '4' was torn off. The smaller numbers represent where Nanette points while she is counting. Here again, the extent and limits of the mother's cooperation are quite clear. Nanette's mother cooperates with the mismatch between Nanette's counting words and the numbers to which she points, and even accords her performance an affirmative *That's right*, followed by the explicit *Those are numbers*. She does not, however, cooperate with Nanette's abolition of the distinction between numbers and letters.

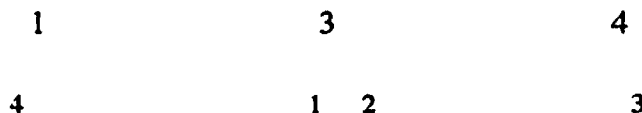


FIGURE 1. Number naming episode.

### 3.2.3. GUY and his mother are playing with the store.

- CHI: What's in here? [holding up doll-sized can of soup]  
 MOT: What does it look like?  
 CHI: Soup.  
 MOT: That's right.  
 MOT: What kind of soup would you like it to be?  
 CHI: Um, um, letter soup.  
 MOT: Letter soup? [stress on 'letter'; shallow fall-rise on 'soup']  
 CHI: Uhhuh.

The limits to the cooperation Guy's mother enacts in this episode are more subtle than those in the preceding episodes. Guy's basic-level *soup* is met with a responsive affirmative *That's right*. His mother then asks him to pick a subordinate category for the soup. Guy decides on *letter soup*, by which I believe he means 'alphabet soup'. The mother doesn't quite get it. Her question (to my ear, at least) does not convey simply 'Did I hear you correctly?' but, in addition, something on the order of 'Who ever heard of *letter soup*?' I hear it as a subtly corrective implicit response rather than the neutral or affirmative it may appear to be in the transcript. She doesn't belabor the point, however; Guy's *Uhhuh* is the end of that episode.

### 3.2.4. PATRICIA and her mother have been playing with the car for some time.

- MOT: What else comes out?  
 CHI: This. [removing wrench from its place in the trunk]  
 MOT: Do you know what that is?  
 CHI: Yes.  
 MOT: What is it? [somewhat surprised]  
 CHI: A banger. [pronounced with ng]



- MOT: A what? [mystified]  
 CHI: A banger. [same pronunciation; slightly more stressed]  
 MOT: A banger. [same pronunciation; skeptical; deep stress on *bang*]  
 CHI: Yeah.  
 MOT: Oh?  
 MOT: What's a banger?  
 CHI: Like a screwdriver. [stress on *screw*]  
 MOT: That's like a screwdriver.  
 MOT: Very good.  
 MOT: I think this is called a wrench. [very gently]  
 CHI: Yeah.  
 MOT: Yes.  
 CHI: This is a blellow wrench.  
 CHI: This is lell- / this is.  
 MOT: The yellow wrench?  
 CHI: Lellow.  
 MOT: Yes, it's yellow.

This utterly charming and highly informative naming episode was first described to me by Lise Menn. Patricia's behavior in this naming episode reminds me of a phrase common in my family's speech: 'often mistaken, but never uncertain'; I think it was first said of a stockbroker. Patricia's first naming of the wrench as a *banger* completely masks her awareness of it as a member of the superordinate category 'tools'. To the extent that the neologism sounds like anything at all, *banger* sounds like 'something to bang with'; the pronounced /g/ being typical of the parents' dialect. Patricia's mother is completely mystified, however, as indicated by her series of four questions, each a corrective response in its own way. *A what?* conveys something between 'I didn't hear you' and 'I heard you, but I don't believe you.' *A banger?* asks 'Did I hear you correctly?' with the deep stress on 'bang-' adding a soupçon of 'I still don't believe you.' But Patricia is so clear and so definite about this name that her mother, while far from accepting *banger*, is moved to inquire further rather than to correct her outright. I read *Oh? What's a banger?* as meaning 'What are you thinking?' The mother is by no means going to cooperate fully with this naming, but she will follow through with her child's initiative and see if there is any meaning behind it.

Patricia's mother then receives the just reward for her cooperation, however limited. Patricia says *Like a screwdriver*, and the light dawns. Patricia is in fact placing the wrench in the category 'tools'; she just had to make up her own word to do it. Patricia then receives the just reward for her correct categorization with her mother's affirmative exact repetition *That's like a screwdriver* and the affirmative comment *Very good*, both said with highly appreciative intonation. Then, after a slight pause, and very gently, the mother explicitly names the wrench *wrench*, further gentling and toning down her corrective naming by framing it, not only with *this is called* rather than simply 'this is', but also with the patently untrue *I think*. Patricia's mother has cooperated with her child's baffling *banger* in a persistent if limited fashion and accords her proper categorization but improper naming the most affirming corrective possible, even to the extent of violating literal truth.

The last five lines of this naming episode comprise a less striking instance of the same phenomenon—'error' followed by affirming corrective—without the mystification. Patricia's use of *blellow* is both recognizable and semantically correct; it is simply mispronounced. Her mother responds with a semantically affirmative exact repetition while correcting the pronunciation and adding the additional slight corrective of question intonation. When Patricia comes back with *Lellow*, arguably an improved pronunciation, her mother responds again with the affirmative comment *Yes* and, as above, the semantically affirming exact repetition with corrective pronunciation.

**3.2.5. SUMMARY.** The data in §3.2 indicate that each of the mothers has definite limits to the extent of her cooperation with her child's basic-level categories. Patricia's mother demonstrates an impressive mastery of the artistic (and instructive?) tension between affirming and correcting. The other mothers, responding to a different sort of naming from their respective children, draw the lines between affirming and correcting more simply, but nonetheless clearly. The limits and extent of the cooperative mother counterbalance each other.

#### DISCUSSION

4. I trust that the extent and limits of 'the cooperative mother' have been sufficiently demonstrated in §3 that no further discussion of that idea is needed at this point. The focus of this section is rather on the utility of ad hoc categories which, at the very least, add a new dimension to discussion of the data already presented.

Each of the children repeatedly manifests a much larger ad hoc category 'things to do in this room' than his or her mother is willing to countenance. The mothers' categories of the same name include primarily the three identified experimental activities—the book, the car, and the store—together with a modicum of housekeeping activities such as nose blowing, sweater removal, and cleaning up, all conducted within the focal range of the camera. The children's

categories, while by no means uniform across the board, are alike in excluding both cleaning up and staying within camera range. Moreover, the individual children extend their 'things to do in this room' categories in a variety of ways: Patricia puts groceries in the trunk of the car, ignoring the boundary between 'store' and 'car'; Guy wants to play with an electric typewriter that isn't even there and eventually consoles himself by talking about and interacting with the video camera; Nanette examines and talks about pictures and things on the walls; and Martin wants to play with a 'radio' he found.<sup>6</sup>

While each of these activities seems well within an appropriate child-level 'things to do in this room', the mothers generally refuse to cooperate with them. This is true both in the instances described above and in other instances regarding ad hoc categories not discussed in this paper such as 'things to do with a book' and 'things to (try to) eat'. The refusals to cooperate are not absolute—Guy's mother even goes so far as to tell him how to get the video camera to move—but they contrast strongly with the high degree of cooperation exhibited toward the children's basic-level categories.

There are proportionately fewer instances of mothers cooperating with and affirming their children's child-level extensions of ad hoc categories than of their comparable extensions of basic-level categories. In addition, the language in which these limits are drawn is more direct and more strongly corrective, not to say negative. The mothers' correctives in §3.2 are mostly tutorial questions. The single direct *no* occurs in §3.2.2 (*No, those aren't letters.*), followed immediately by two turns of encouraging the child to discover the right answer for herself (*What! Look again. See if you can see what those are.*).

Contrast the above with the direct (and often repeated) negation of the representative data sets below. Only Patricia's mother uses questions, and the questions she uses are persuasive rather than tutorial in nature; moreover, she doesn't let it go until Patricia complies fully with the mother's ad hoc category 'things to do in this room' by coming back into camera range.

Martin wants to play with the 'radio':

- MOT: No, no, Martin.  
 CHI: xxx.  
 MOT: That's not ours.  
 MOT: We don't touch other people's radios.

Nanette has wandered out of camera range:

- MOT: But we have to do it over here because they're taking pictures of you and Mommy, like we talked about at home.

Guy wants to play with an electric typewriter:

- MOT: No.  
 MOT: The special typewriter is down the hall.

Patricia wants the (pretend) garage to be out of camera range:

- MOT: Why don't you make this the garage?  
 MOT: Under the chair.  
 MOT: Could you make that the garage?  
 MOT: Instead of going so far away?

Whatever the source of the difference, there does seem to be a distinct difference between mothers' responses to children's child-like extensions (i.e. appropriate to the normal child) of basic-level and of ad hoc categories.

Mothers also make active use of ad hoc categories in naming things for their children. Let us re-examine some of the data from §3.1.

Nanette's mother (§3.1.2), with her initial use of a *special car that you can take apart*, acknowledges Nanette's knowledge of 'car' and differentiates this particular car from most other cars, specifically at the level of utility, by placing it firmly in Nanette's ad hoc category of 'things to take apart'. She is offering Nanette something which, while somewhat marginal in the category 'car,' is clearly central in the category 'things to take apart'. What fun! The mother is also differentiating the car from the story and the store; she is highlighting it within the ad hoc category 'things to do in this room' with her extended and very positive description.

This instance is particularly interesting to me because the car is identified as less prototypical, yet positively so. I had expected all such 'less prototypical' identifications to have only a negative impact, subtle or otherwise. I had expected them to mean approximately, 'This is a sort of X, but it isn't a very good example of X,' with the implication, 'Marginal members of categories aren't as important as central members of categories.' A *special car that you can take apart*, however, is not only differentiated but positively so. I believe, although I am not yet ready

<sup>6</sup> The item in question is actually the audio tape recorder being used to record the play session. Martin's mother deliberately misnames it, apparently to reduce any emotional response such as interest or awkwardness.

to argue, that the positiveness of this 'less prototypical' naming is related to making the car central in another category, the ad hoc category 'things to take apart'.

Martin's mother (§3.1.1), with her initial identification of the car as *like a workbench*, also seems to place it in the category 'things to take apart,' though less clearly, and certainly less explicitly. The car does not seem to be particularly central to 'things to take apart' in this naming, however, and there is a negative tone to *it looks like a workbench, only it's a car*, derived from the negative *only*. This naming episode seems to yield the reverse correlation from *a special car that you can take apart*—a marginal or unclear location of the car in the ad hoc category 'things to take apart' and a subtly negative impact on the naming.

It may be, then, that there actually is, as I expected, something negative about placing an item on the periphery of its category; and it may be further that this negative effect can be reversed by simultaneously placing the item in the center of a different, and probably ad hoc, category. In any case, mothers do use ad hoc categories in their naming for children.

#### CONCLUSION

5. It would seem that how parents name things for children is a fruitful area for investigation. We have seen both that mothers do cooperate with their children's extensions of basic-level categories (§3.1) and that there are limits to their cooperation (§3.2). It would be terrific if the extent and limits of 'the cooperative mother' could be quantified in some way; e.g., do they vary more directly with the MLU, the vocabulary size, or the age of the child? How about gender? Another question for further research is whether fathers behave at all in the same way; if there is such a thing as 'the cooperative father', does he tend to cooperate more than, less than, or differently from 'the cooperative mother'?

We have also seen that mothers seem to be considerably less willing to cooperate with their children's ad hoc categories than with their basic-level categories, and that there may be some interaction between the use of ad hoc categories and the positiveness of naming episodes, at least for items peripheral to their basic-level categories (§4). This latter issue, if sufficiently important, would benefit even from introspection, as well as from psycholinguistic and discourse data; and it may be that the philosophers have something to say about it. As for the issue of mothers' (and fathers') non-cooperation with their children's ad hoc categories, it would again be terrific if this could be quantified in some way. Given that ad hoc categories are, by definition, not conventional, I expect that the predictive ability in this regard of such factors as the child's MLU, vocabulary size, and age would vary considerably from their predictive ability for 'the cooperative mother'.

How do parents name things for children? They name first on some modified version of the basic level and also use ad hoc categories, though differentially. Beyond that, we don't yet know.

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