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ABSTRACT

With reference to Fenson's (1984) study of American children's pretend actions and utterances, this study examined the development of pretend actions and utterances in the play of 16 Japanese firstborn children. Subjects, whose cognitive and language development had been followed experimentally since the age of 6 months, were nonretarded 30-month-olds from middle class families. Videotapes were made of the children's spontaneous behavior with dolls and a stuffed toy, miniature toys, and junk materials. Pretend actions and utterances were grouped into the categories of decentration, decontextualization, and integration. Findings indicated that a majority of children reached the levels of active other-directed, substitutive, and multischeme expressions in both actions and utterances. However, it was suggested that the combination of modeling and feeding utensils would significantly increase the proportion of children showing inventive expressions. Developing skills such as active other-directed actions toward lifelike objects, substitutive actions for physical dissimilarity between the signifier and the signified, substitutive utterances other than naming, and inventive actions of object use were also interpreted to be facilitated by modeling. Since the roles of actions and utterances were not always the same in pretend play, it was suggested that further studies on multimodal aspects of pretend play are needed. (RH)

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PRETEND ACTIONS AND UTTERANCES IN THE PLAY OF THIRTY-MONTH-OLDS

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Development of early pretend play or symbolic play has been studied from 3 points of view: decentration, decontextualization and integration (see the reviews by Fein, 1981; McCune-Nicolich, 1981; McCune-Nicolich & Fenson, 1984; Rubin et al., 1983). Decentration is to direct play activities towards from the self to others. Other-directed play develops from passive to active agent use. Besides, Fenson & Ramsey (1980) pointed out that the onset of object-directed expressions was close to that of passive agent use whereas the agent use in the expressions remained as the self. Decontextualization refers to decreased environmental support and progresses from imitation to substitution and then on to invention, where animate or inanimate components are created without direct material support. Integration concerns combinations of separate expressions in coordinated sequences. It progresses from single to single-scheme and then to multischeme expressions.

While pretend actions were extensively studied with children under 3 years old, little information is available in terms of pretend utterances at this age level. Ungerer et al. (1981) focused on substitution and found substitutive utterances developed from physical similarity to physical dissimilarity between the signifier and the signified where the utterances were measured together with actions. As opposed to Ungerer et al., Fenson (1984) coded actions and utterances in a separate manner but with the same measures: decentration, decontextualization and integration. Although Fenson revealed that the roles of actions and utterances were sometimes parallel, sometimes complementary and sometimes

mutually exclusive, a majority of 31-month-olds reached the levels of active other-directed, inventive and multischeme expressions in both actions and utterances after modeling.

This study was aimed at examining the development of pretend actions and utterances in the play of 30-month-olds in a non-Western culture with reference to Fenson's study of American children.

METHOD

1. Subjects

The samples were 16 30-month-old Japanese firstborn nonretarded children (8 of each sex) from middle-class families. They were selected from the files of the Well Babies Clinic* at Kosei Hospital in Tokyo where their neurological, physical and psychological development had been examined regularly. Their cognitive and language development had been followed experimentally in this institute since the age of 6 months.

2. Materials

The materials consisted of 2 dolls, a stuffed toy dog dressed either as a boy or a girl (30 cm in height), various miniature toys in a size appropriate for the doll's or dog's use, and junk materials. The miniature toys were cooking utensils (oven with gas table, pan, kettle; one each), feeding implements (tea cup, spoon, plate, rice bowl, pair of chopsticks; three each), grooming and dressing materials (hand mirror, comb, hand towel, bag, hat; one each), bedding (coverlet, bed mat, pillow; one each), dusting utensils (sweeper, dustpan, duster; one each), a baseball set (1 bat, 2 balls), and cars (1 truck, 1 wagon). The junk materials were composed of 3 types of twigs (large, small, Y-shaped; 10-20 cm in length; two each), 2 crumpled pieces of white papers (15 x 15 cm), 6 square sponges (2 x 3 x 2 cm) and a square cloth (50 x 50 cm).

3. Procedure

The observations were conducted in a small carpeted room at this institute without any equipment except for air-conditioning. The room

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* The clinic was closed after this study.

was divided into 2 parts by a screen for observing and videotape recording. The children were individually observed for 15 minutes in a presence of his or her mother after a 5-minute warming-up session with the mother and a female experimenter using another one or two toys. All materials were introduced simultaneously in a standard pattern on the floor of one side of the room. The mother was instructed neither to initiate nor to teach pretend behavior. However, she was encouraged to play with her child, limiting her pretend expressions to her child's repertory when her child approached her in that way. The experimenter hid behind the screen after introducing the materials telling the child to play with the mother. The whole session was videotaped. The experimenter took notes when there was difficulty in interpreting the subject's pretend expressions, especially when substitution, invention or unclear utterances occurred. After each session, the experimenter elicited the mother's interpretations of her child's expressions.

4. Data Coding

The videotapes were transcribed with a given form which indicated actions and utterances in a separate and serial manner. When actions and utterances occurred together, they were listed on the same line. First, nonpretend actions and utterances were excluded, e.g., picking up a cup and saying "This is cup" or "This is mine". Pretend actions and utterances were scored independently with a coding scheme adapted from the study of Fenson (1984) with some modification. However, coders referred to actions when crediting decontextualized utterances. Each pretend action or utterance was assigned to all of 3 categories for coding; decentration, decontextualization and integration. The definitions of subcategories within these 3 categories are shown in Table 1. Each multischeme combination was counted based on a combination of 2 or 3 different acts or statements. Two trained coders cooperated to score the records of 6 samples, whose pretend expressions were difficult in part to interpret, with reference to the mother's explanation of her child's expressions. Another 3 samples were scored independently by the same 2 coders. Since the ratio of agreement exceeded 90%, the rest of samples were coded by one of them.

RESULTS

1. Proportion of Children Showing Pretend Expressions

As shown in Table 1, the majority of children reached the levels of active other-directed, substitutive and multischeme expressions in both actions and utterances. Passive other-directed expressions in both modes were exhibited by half of the children and single scheme expressions in both modes by a minority. Significant differences between actions and utterances were not found in any measures (McNemar test, two-tailed).

2. Frequency and Variety of Pretend Expressions

All children displayed pretend utterances alone and in conjunction with actions as well as actions alone. Yet thirty-six percent of all pretend expressions across children were combinations of actions and utterances, 54% for actions alone and 10% for utterances alone.

Mean frequencies of pretend expressions and mean number of different pretend expressions are seen in Table 3 and Table 4, respectively. Actions revealed significantly larger values in both frequency and variety than utterances in self-directed, passive other-directed, substitutive and multischeme expressions. Single expressions occurred more frequently and more in variety in utterances than in actions. Object-directed and imitative expressions were exhibited more often in actions than in utterances. However, the variety of these 2 types of expressions did not differ between 2 modes. There were no significant differences between 2 modes in active other-directed, inventive and single scheme expressions.

While the majority of children attained to the levels of active other-directed, substitutive and multischeme expressions in both modes as mentioned above, object-directed and imitative expressions were still superior in both modes. As far as integration is concerned, single expressions were common in utterances despite the advantage of multischeme expressions in actions.

3. Developing Expressions

(1) Active other-directed expressions

Seventy-five percent and 38% of the children demonstrated mother-

and doll-directed actions, respectively. Yet 62% of all instances were mother-directed actions. While actions of others' object use were found towards the mother such as handing feeding utensils with a bow, none of children showed to let a doll or toy dog use objects. They merely have it walk, stand up, sit down, bow, etc.

As far as utterances are concerned, 69% and 38% of children exhibited mother- and doll-directed expressions, respectively. Fifty-nine percent of utterances were mother-directed expressions. While almost half of instances occurred without any actions in both mother- and doll-directed utterances (47% and 40%, respectively), another half were accompanied by actions in a different manner; active other-directed actions towards the mother (48%) and passive other-directed actions towards lifelike objects (46%). Although the contents of utterances were dominated by actions rather than needs, wants or feelings of the mother or lifelike objects, utterances of others' object use occurred only when directed towards the mother, usually in the manner of a request, e.g., "Please drink coffee", "Mommy, give cake to doggie". Two children displayed utterances implying the object use of a doll or toy dog in terms of its needs or wants, e.g., "Doggie want to put medicine", "Want fruit?". Utterances of others' needs, wants or feelings tended to take the form of questions more often towards the mother than towards lifelike objects.

(2) Substitutive and inventive expressions

All of the children showed substitutive actions with imitative use of realistic toys and 81% of them without. However, substitutive actions combined with imitative use of realistic toys were still common (69% of all instances). While all children demonstrated substitutive actions for physical similarity between the signifier and the signified, 44% of them did so despite physical dissimilarity, e.g., putting a sponge in a kettle and then pouring from it to a cup saying "Tea". When a substitute object had a function different from that of the referent, actions for dissimilarity were found in only 13% of the children, e.g., rubbing the floor with a kettle saying "This is vacuum cleaner. I clean here".

Although 81% of all substitutive utterances co-occurred with actions, those in conjunction with imitative use of realistic toys were not dominant (44% of all instances). All instances of transforming objects into something else remained at the level of identification. Seventy-seven percent of those instances were only naming, e.g., "This is cake". The rest were described in the manner of actions, e.g., "I give cake to doggie", while bringing a sponge close to the mouth of a toy dog. However, none of substitutive utterances mentioned the state, feature or function of objects. Substitutive utterances transforming the self, the mother or lifelike objects into someone else were found in 25% of the children, e.g., "Gas station man says thank you", while having a boy doll bow. However, the substitution of inanimate objects for animate ones was observed in neither utterances nor actions.

All instances of inventive actions and utterances were found in the context of a play theme. More than half of expressions in each mode occurred in terms of cooking, eating, feeding or food; 56% for actions and 64% for utterances. All inventive actions demonstrated the use of an absent object, e.g., picking up imaginary food from the floor and putting it into a rice bowl and then placing the rice bowl on the floor in front of the mother, saying "That is tasty. Please eat", or picking an imaginary orange from the wall and giving it to the mother, saying "Please eat orange". Yet only 13% of the children represented the movement of an absent object itself in use by means of a part of their bodies (e.g., a finger for a knife), or by holding and operating the absent object. As opposed to substitutive utterances, the majority of inventive utterances were not accompanied by actions (76%) and depicted in the manner of actions, wants, needs or requests rather than merely naming (96%), e.g., "I want watermelon. Mommy, give me watermelon". Even the state, feature or function of an absent object was expressed in 25% of the children. Inventive utterances of an absent person were also seen in 25% of the children.

(3) Multischeme expressions

More than half of multischeme expressions in actions or utterances occurred under the theme of cooking, eating, feeding or related

activities; 51% for actions and 57% for utterances. This tendency was seen especially in the maximum sequence of different-act-combinations of which mean was 8.8 (SD = 2.4, R = 5 - 13). The second most popular theme had reference to cars; 18% for actions and 16% for utterances. Most of multischeme statements were in combination with actions (85%). While 87% and 13% of the children were at the levels of multiword and two-word utterances, respectively, and all children showed planning by a single statement prior to pretend actions, planning by 2 or more statements which included the outcomes of actions were observed in 38% of the children, e.g., "When I turn here (the dial of an oven), cooking start. And then I eat".

DISCUSSION

1. Proportion of Children Showing Pretend Expressions

Compared to the data of 31-month-olds in the premodeling phase of Fenson's study (1984, see Table 1), a much higher proportion of children exhibited self-directed utterances, object-directed utterances, active other-directed actions, substitutive utterances and inventive expressions in both modes in the present study. On the other hand, a much lower proportion of children demonstrated passive other-directed expressions in both modes and single scheme actions.

In Fenson's study, decentration measures were probably coded mainly in terms of lifelike objects even in the premodeling phase, since the mother was asked to record her child's verbalization during play periods. The child had more chances to play with the mother in this study since the mother was not instructed to do other activities in spite of the limitation of her pretend expressions to those in her child's repertory. Actually, a higher proportion of children and instances featured expressions towards the mother rather than towards lifelike objects. Besides, expressions towards the mother were usually in an active other-directed manner. Therefore, the big differences of proportion between the 2 studies in passive other-directed expressions in both modes, active other-directed actions and single scheme actions, are due to the extent

of the mother's participation in her child's play.

Most of self- and object-directed utterances occurred with actions in the present study. The current study used a greater variety of both realistic toys in general and those which could be used towards the self and inanimate objects than those used in Fenson's study. The observation period was also longer in duration in the present study; 15 minutes vs. the 9 minutes (3 minutes for each of 3 toy sets) in Fenson's study. Thus, it is regarded that the proportion of children in self- and object-directed utterances differed between 2 studies because of the variety of realistic toys and the duration of observation periods.

While the majority of inventive actions or utterances were not accompanied by the other mode, the most popular theme seen in both modes was cooking, eating, feeding or food. However, this theme was possible in only one of 3 toy sets and partially in another set in Fenson's study, which resulted in a shorter duration of observation period. Since the imitative use of feeding utensils tends to appear first in pretend play (Lowe, 1975; Shimada et al., 1979) and repeating the similar progression in a new skill to that in already acquired skills was suggested in our previous study (Shimada et al., 1981), the theme related to cooking and feeding is supposed to be easiest to educe the child's inventive expressions. Consequently, the difference of material settings as well as the duration of observation periods are interpreted to affect the results of 2 studies.

In sum, the discrepancy of results in 2 studies is influenced by observational settings. Different results from different methodology were pointed out in the review of literature on early pretend play by McCune-Nicolich & Fenson (1984).

Yet, in Fenson's study, modeling increased the proportion of children to almost the same levels as those of this study in object-directed utterances, substitutive utterances and inventive expressions in both modes. Whereas the proportion of children in active other-directed actions remained .58 even after modeling, this proportion might be reasonable since the measure was mainly towards lifelike objects. The present study showed half of active other-directed utterances towards

lifelike objects co-occurring with passive other-directed actions towards them as well, which implies the difficulty of manipulating lifelike objects as active agents such as by having one hold a cup and drink from it. Since several studies have indicated children imitate the behavior that they can understand and control rather than blindly imitate (Fein, 1975; Fenson, 1984; Fenson & Ramsey, 1981; Largo & Howard, 1979; Watson & Fischer, 1977, 1980), it may be concluded as follows:

The majority of children around 30 months of age reach the levels of active other-directed, substitutive (or presumably invention in conjunction with modeling and feeding utensils), and multischeme expressions in both actions and utterances while the appearance of these expressions relies on play situations.

2. Developing Expressions

None of children demonstrated actions of other's object use towards lifelike objects. Besides, a half of active other-directed utterances towards lifelike objects were combined with passive other-directed actions. Infrequent appearance of this type of action in spontaneous play and the tremendous effect of modeling on the action of children around 30 months of age were reported by Fenson (1984) and Largo & Howard (1979). These results suggest that 30-month-olds tend to play at lower level in uncontrolled situations due to the difficulty of manipulation in activating lifelike objects regardless of a child's abilities. Lowe (1975) observed the actions more often in 36-month-olds than in 30-month-olds.

The results of substitutive actions transforming inanimate objects to something else indicate these expressions develop from physical similarity on to physical dissimilarity with ambiguous function and then on to physical dissimilarity with different function between the signifier and the signified. The above progression is supported by several studies (F'd[illegible] & Pederson, 1978; Jackowitz & Watson, 1980; Pederson et al., [illegible] Saso et al., 1981; Takahashi et al., 1972; Tsujino, 1978; U[illegible] et al., 1981). Pederson et al. (1981) revealed the ability of 30-month-olds to perform substitutive actions for physical dissimilarity in highly structured but non-modeling situations, as

long as substitute objects had ambiguous function or low likelihood of educing manipulation despite their own function. Modeling probably facilitates the ability of 30-month-olds to control their actions even over substitute objects possessing different function from that of the referent and a high possibility of educing manipulation.

Most substitutive utterances transforming inanimate objects into something else remained at the level of naming. None of substitutive utterances mentioned the state, feature or function of objects. Since the latter type of utterance was seen in the majority of the same children at 36 months of age in free play with colored blocks possibly being made into different forms in combination (Iitaka et al., 1984, p. 84) and most 30-month-olds reach the level of multiword utterances modeling is supposed to enhance this type of pretend utterance in 30-month-olds.

The rare occurrence of representing movement of an absent object itself by using a part of the child's body or by holding and operating it differs from the results of other studies of children around this age level (Elder & Pederson, 1978; Fenson, 1984; Overton & Jackson, 1973; Saso et al., 1981). Because these studies were conducted in structured settings, this type of inventive action presumably appears more often in structured rather than unstructured settings with various realistic toys. The representation by part of the body and of self-directed use (e.g., comb) tend to develop earlier than that by holding and of object-directed use (e.g., scissors), respectively, (Overton & Jackson, 1973; Saso et al., 1981). Modeling might even increase the representation by holding and operating an absent object in 30-month-olds when the object is used towards the self (Fenson, 1984).

All children exhibited planning by a single statement prior to pretend actions as well as substitutive actions for physical similarity with different function between the signifier and the signified. Even the children who did not demonstrate active other-directed actions at 30 months showed at 24 months. Thus all children are regarded to already reach the level 5 of pretend play by McCune-Nicolich (1981). Nevertheless, they revealed difficulties in planning by 2 or more statements

depicted the outcomes of actions in contrast to their subsequent organized actions. This suggests verbal planning of following organized actions appears at later months than executing the actions themselves in pretend play.

3. Role of Actions and Utterances in Pretend Play

Although all children showed pretend utterances alone or in combination with actions, 50% of the same children did so at the age of 20 months as opposed to 100% in pretend actions when re-analysing the data of Shimada et al. (1981). While observational settings differ between these 2 studies, the marked increment of pretend utterances between 20 and 30 months of age is supported by Fenson (1984) and Bretherton et al. (1984). The dominant mode, however, is still actions in the pretend play of 30-month-olds as shown in the results of frequency and variety of pretend expressions. These results indicate pretend utterances in general develop later than pretend actions.

Yet the roles of actions and utterances are not always the same in pretend play. They are parallel (e.g., active other-directed actions and utterances towards the mother), complementary (e.g., active other-directed utterances towards lifelike objects with passive other-directed actions) or mutually exclusive (e.g., utterances of other's feeling, needs or wants) as pointed out by Fenson (1984). Since actions still play a role in the pretend play of older children (Field et al., 1982; Garvey, 1977; Piaget, 1945/1962), utterances will not take over actions. Rather multimodal aspects of pretend play suggest a need for further study.

SUMMARY

The purpose of this study was to examine the development of pretend actions and utterances in the play of 30-month-olds.

The subjects were 16 Japanese firstborn nonretarded children (8 of each sex) and observed individually for 15 minutes in laboratory settings. The materials were composed of lifelike objects, miniature toys and junk materials, and presented simultaneously in a standard pattern. The

videotapes of children's spontaneous behavior were coded as pretend actions and utterances according to categories of decentration, decontextualization and integration in a separate manner for each mode.

A majority of children reached the levels of active other-directed, substitutive and multischeme expressions in both actions and utterances. However, it is suggested that the combination of modeling and feeding utensils would increase the proportion of children showing inventive expressions to that of a majority. Developing skills such as active other-directed actions towards lifelike objects, substitutive actions for physical dissimilarity between the signifier and the signified, substitutive utterances other than naming, and inventive actions of object use were also interpreted to be facilitated by modeling.

Since the roles of actions and utterances were not always the same in pretend play, further studies on multimodal aspects of pretend play are suggested.

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Table 1 Definitions and Examples of Pretend Expressions

1. Decentration

   (1) Self
   expressions directed towards the child himself or herself.
   action : The child eats from a rice bowl with chopsticks. The child combs own hair.
   utterance: "I eat rice" "I comb my hair"

   (2) Object
   expressions directed towards inanimate objects while agent remains as the self, or expressions describing some feature of inanimate objects.
   action : The child pours from a kettle to a cup. The child sets a pan on a gas table.
   utterance: "I pour tea" "I cook food" "That is hot"

   (3) Passive other
   expressions directed towards the mother or lifelike objects as if to treat them as mere recipients of the child's acts, or expressions describing some feature of the mother or lifelike objects.
   action : The child brings a cup close to the others' mouths as if to feed them. The child combs the others' hair.
   utterance: "I feed baby" "I comb mommy's hair" "Doggie is clean now"

   (4) Active other
   expressions directed towards the mother or lifelike objects as if to have them actually participate, or expressions describing actions potential, needs, wants or feelings of the mother or lifelike objects.
   action : The child hands a cup to the mother while bowing or asking her to drink by other gestures. The child has a doll walk. The child tries to have a doll hold a cup and drink from it.
   utterance: "Please drink tea" "Mommy, give milk to baby" "Want some rice?" "Baby is crying" "Doggie feel cold"

2. Decontextualization

   (1) Imitative
   manipulating or describing objects according to their appropriate usage or other utterances related to their appropriate usage.
   action : The child hits a ball with a bat. The child has a toy dog sit down on the floor.
   utterance: "I hit ball" "It is home run" "Doggie is tired"

   (2) Substitutive
   transforming the self, the mother or objects into someone or something else.
   action : The child brings a sponge (food) in a plate to a doll's mouth. The child sings a song facing a mirror (microphone) in hand.
   utterance: "This is cake", setting a sponge on a plate. "Gas station man says thank you", having a boy doll bow. "Doctor, please examine doggie", handing a toy dog to the mother.

   (3) Inventive
   creating absent animate or inanimate components without direct material support.
   action : The child picks up an imaginary orange and gives it to the mother. The child turns on an imaginary water faucet and washes own hands.
   utterance: "Here is mommy's fruit", pointing imaginary fruit on the floor. "Boy, be careful! Car go", placing a truck on the floor and watching the expected direction of movement.

3. Integration

   (1) Single
   expressions by a single act or by a single statement.
   action : The child sweeps the floor with a sweeper. The child has the mother look in a mirror.
   utterance: "I clean here" "Mommy is cute"

   (2) Single-scheme
   Directing the same act or statement towards 2 or more different recipients.
   action : The child combs own hair and then the mother's hair. The child covers a doll with a coverlet and then a toy dog with a square cloth.
   utterance: "I comb my hair, now mommy's" "I cover baby coverlet, now doggie"

(3) Multischeme
combining 2 or 3 different acts or statements in logical or some valid order.
action : The child takes out imaginary food from an oven and puts it in a plate and then hands it to the mother.
The child hugs a doll and then covers it with a coverlet.
utterance: "I cooked food. Please eat. That is tasty"
"Baby is cute. Baby want to sleep"

Note: The subject of a sentence is omitted often in spoken Japanese. In this case, decentration is coded based on the inflection of verbs.

Table 2 Proportion of Children Showing Pretend Expressions

	Measure	Present study		Fenson's study*	
		Action	Utterance	Action	Utterance
Decentration	self	1.00	.88	.88	.29
	object	1.00	1.00	1.00	.75
	passive other	.56	.50	1.00	.75
	active other	.81	.88	.17	.92
Decontextualization	imitative	1.00	1.00	—	—
	substitutive	1.00	.69	.83	.50
	inventive	.56	.56	.13	.13
Integration	single	1.00	1.00	—	—
	single scheme	.19	.00	.54	.17
	multischeme	1.00	.94	.83	.96

* Data of 31-month-olds in a premodeling phase (Fenson, 1984, pp. 258, 262).

Table 3 Mean Frequencies of Pretend Expressions

	Measure	Action	Utterance	t value	P level
Decentration	self	6.9	3.0	3.75	< .01
	object	51.2	24.4	7.26	< .001
	passive other	3.9	0.4	2.18	< .05
	active other	7.7	6.8	0.38	> .7
Decontex-tualization	imitative	52.8	29.0	5.73	< .001
	substitutive	14.5	2.4	4.93	< .001
	inventive	2.4	3.0	0.57	> .5
Integration	single	7.3	23.6	4.38	< .001
	single-scheme	0.3	0.0	1.50	> .1
	multischeme	27.4	5.9	10.43	< .001

Table 4 Mean Number of Different Pretend Expressions

	Measure	Action	Utterance	t value	P level
Decentration	self	4.8	2.5	3.33	< .01
	object	17.6	14.3	1.31	> .2
	passive other	1.8	0.4	2.54	< .05
	active other	4.6	5.2	0.41	> .6
Decontex-tualization	imitative	21.3	18.1	1.12	> .2
	substitutive	7.1	1.9	4.68	< .001
	inventive	1.9	2.5	0.67	> .5
Integration	single	5.4	15.6	5.25	< .001
	single-scheme	0.3	0.0	1.50	> .1
	multischeme	18.1	5.7	8.73	< .001