

PD - AAP - 118

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UNIVERSITY OF CALIFORNIA, BERKELEY

931-1309/92

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COLLEGE OF NATURAL RESOURCES AND
INSTITUTE OF INTERNATIONAL STUDIES

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COLLABORATIVE RESEARCH SUPPORT PROGRAM
OF NUTRITION AND FUNCTION

NUTRITION CRSP
215 MOSES HALL
BERKELEY, CALIFORNIA 94720
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March 23, 1984

Documentation Coordinator
Office of Development Information
and Utilization
Bureau for Science & Technology
U.S. AID
Washington, D.C. 20523

Re: ✓ DAN 1309-G-SS-1070-00 (Article VII)
✓ Nutrition Intake and Function

Dear Coordinator:

Submitted herewith is a copy of the trip report for Dr. Marian Sigman
(Kenya Project) covering period 2/1/84 through 2/29/84.

Sincerely,

Filomina Brown
Administrative Assistant

Enclosure

U. E. R. DE PSYCHOLOGIE

LABORATOIRE DE
PSYCHOLOGIE EXPÉRIMENTALE

ASSOCIÉ AU

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

PD-AAP-118

C.N.R.S. 24161

March 1, 1984

Dr. Charlotte Neumann
School of Public Health
University of California
Los Angeles, California 90024, U.S.A.

Dear Charlotte:

I am writing to report on my visit to Project Nutrition CRSP in February of this year. Since I do not have the address for Management Entity, perhaps Gloria could send a copy of this letter to Judith Balderston.

Let me start first with the cognitive measures. During my visit in September, I taught the Uzgiris-Hunt subscales and Bayley verbal scale to Lucy Nyaga and Annett Nyaga. In my absence and under the direction of Eric Carter, they administered these scales to numerous toddlers and also conducted a small reliability study. They tested 14 children twice over a week's time with a different tester at each session. On the Bayley Verbal Scale, the agreement between scores across testers and weeks averaged 85%. Agreement on 16 of the 20 items was over 86%; for only 4 items was agreement less than 80%. Since agreement was computed not only between examiners but also over sessions, this seems like adequate inter-observer agreement to me. On the Uzgiris-Hunt subscales, the agreement was less good. There was perfect agreement on the Object Permanence subscale score for 90% of the cases and on Vocal Imitation for 80% of the cases but only perfect agreement on scores for 50-55% of the cases for Means-End and Scheme subscales. The lack of agreement on the Means-End scale seems to reflect a problem with scoring and I have changed the scoring procedure accordingly. The lack of agreement on the Schemes scale reflects a true variability over sessions in the children's tendencies to play with objects. We have included an observation of play behaviors in the toddler interaction observation to provide more stable data in this regard. On the items of the Bayley Behavior Record, there was infrequently perfect agreement. However, if one computes agreement within one scale point, then agreement on 7 items reaches 85%. There are two items which are much worse for understandable reasons. Fearfulness declined over session which is one reason that we are repeating the tests on the 18month-olds. The disagreement in the judgment of imaginative play mirrors the problem with the scheme scale. Besides these items, the reliability of items seems adequate. However, we could use inter-observer reliability from observers at the same session. We should have this in the next month as each of the new testers is going to test at least 12 toddlers with the previously trained testers and score the tests independently. In this regard, it would be best if each tester remained the same over the two testing sessions for each child. I believe that Eric Carter will coordinate this and send me copies of the scoring sheets so that I can compute reliability figures. I do not think the new testers should take over responsibilities for the testing until we have these data.

Because the other projects are going to use the whole Bayley Mental Scale, I also taught the Cognitive Group the remaining items from the Bayley Scale. They will be practicing these in the next month and should have reliability data on this as well. We plan to use the whole Scale at 24 and 30 months of age. I feel that the 24 month-olds should be tested twice, like the 18 month-olds, because the toddlers are so wary as to make a single testing session unrepresentative of their abilities.

The Cognitive Group also learned the school-age measures. They will practice administering these measures individually to 3-5 children in the pilot area. It would be very useful if they repeated these tests a week later so we had some test-retest reliability data-the same tester over sessions.

We have postponed the adult cognitive testing for several months because we need translation of several WAIS subscales. I wish we had at least one assessment developed in Kenya since cultural factors are so critical for measuring intellectual capacities of adults.

My second major activity during this visit was to modify the observational system designed by Robin Groski and myself since the previous version was ^a unworkable. Because of the extensive experience of the activity group and the marvelous leadership provided by Dorothy Cattle and Benjamin Nyaga, the new method was learned quickly. They were able to complete a reliability study on the new methods and the interobserver correlations were very high. I am including a summary sheet of this data. I have written to Drs. Carter and Cattle that the observers seem ready to use these methods on the study infants and toddlers.

The other set of observation procedures required by the Core are the school observations. We reformulated these measures for the Kenyan classroom and simplified the playground observation. The activity group is planning to carry out a small reliability study in the pilot area and, I hope, will send me copies of their data. The major problem with the playground observation is to obtain sufficient data for each child. The children are only in the playground for a short period; the playgrounds are so large as to make observation of more than one child impossible; and the target children attend numerous schools. I believe that this problem should be discussed at the May meeting. A possible solution would be to restrict this measure to a portion of the school-age sample.

We also worked on the Brazelton a bit in the last two days of my visit. I demonstrated the exam to Millicent, Mrs. Carter, and Susan D'Souza and lent my manual to the latter. I have suggested to them that they practice the assessments and then measure their scoring agreements. After this, they could have Dr. Meme observe their administration and scoring. There should be time for this unless there are a great number of unexpected births as there were in the last two days of my visit.

I have proposed to Eric that I might return earlier than July in order to catch the newborns, the 24-month-olds, and the 6-month-olds, who are supposed to be assessed with the Bayley motor scale and, hopefully, a brief cognitive measure. I feel much enthusiasm for the project because of the remarkable organization and talented people involved. With any luck, Susan D'Souza will have decided to work in the project and should contribute a great deal. Please forgive the typing but the French place their "M"s and "Q"s in very peculiar places on their typewriters.

Sincerely,

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Cognitive Development
Birth - Brazelton Examination

6 months - Infant Interaction observation

8 months - Bayley Motor Scale
Bayley Behavior Ratings

18-30 months - Toddler Interaction observation

18, 24, + 30 months - Bayley Mental Scale / Uzgiris-Hunt scales

18 months - only Bayley Verbal Items

24 + 30 months - all Bayley Mental Scale

Uzgiris-Hunt scales: object permanence,
means/ends, vocal imitation, schemes

Play is measured as part of the Toddler
Interaction observation

Bayley Behavior Ratings

School age measures - Classroom observation

(measure of attention) and Playground

observation (measure of social functioning)

Cognitive measures - WISC-R Digit Span + Block Design

Verbal Meaning Scale - From the

East African Test For Children

Raven's Progressive matrices

Draw-A-Person

Adult measures (still tentative)

WAIS Block Design + Digit Span

Porteus mazes

Raven's Progressive matrices

WAIS Similarities and Arithmetic Scales

Best Available Document

Covariations between Observations

Atod (rev)
Interaction

Enf. int
Interaction

Codes $r = (N=17)$

Codes $r = (N=11)$

Care .98

Care .97

Carry .78

Carry .79

Touch .85

Touch .63

Track .90

Track .89

Social .73

Look at .87

Interaction

Each other

Play .93

Address Vocalize .89

Vocalize .85

Cries .96

Cries .73

Smiles .96

Smiles .81

Play -

Sample .87

Response to Vocal

Functional .87

Vocal .59 Vocal + Both $r = .61$

Symbolic .96

None .72 some response $r = .8$

Response to Vocal

Response to Cry

Vocal .74

Vocal .69

None .74

with both .81

Response to (r)

Physical .65

Vocal .80

with both .99

None .69

None .92

BAYLEY MOTOR SCALE - 6 MONTH-OLD INFANTS

Place the child in a sitting position with legs straightened. If he does not sit alone, support him with your hands at lower back.

Place cube within reach. If the child does not pick it up, place it in his hand. and another in his other hand.

Place a small piece of cereal or food within reach. If he doesn't reach for it tap near the food to draw his attention.

Hold an object in front of the child. Observe reaching. Put object in his hand. Observe wrists.

Hold child at your shoulder without supporting head. Carry about. Tilt body to an angle of 45° from vertical and remove support from his head, tilting him so that his head can drop forward, then backward, then to right and then to left. Return child to vertical before tilting him in another direction.

Put child on his back. Observe if he turns to side. Observe if lifts his head and shoulders to sit. Give child your thumbs to grasp. Allow him to pull himself to a sitting position and, if he is able, to a standing position. Do not pull him yourself.

Place child on stomach. Note mode of movement.

Hold child under his arms and support upright with feet on floor or table or ground.

BAYLEY MOTOR SCALES - 6 MONTH OLD INFANT
SCORING SHEET

PASS = 1 FAIL = 2

SITTING:

| | | |
|---|-------|----|
| 13 Sits with support | _____ | 22 |
| 17 Sits with slight support | _____ | 23 |
| 23 Sits alone for a moment without support | _____ | 24 |
| 27 Sits alone for 30 seconds or (not steady) more | _____ | 25 |
| 29 Sits alone steadily | _____ | 26 |
| 31 Sits alone good coordination | _____ | 27 |
| While doing other things | | |

CUBE:

| | | |
|---------------------------------------|-------|----|
| 16 Holds cube in palm without thumb | _____ | 28 |
| 21 Picks up cube with thumb | | |
| Partially opposed to fingers | _____ | 29 |
| 32 Picks up cube with thumb & fingers | | |
| completely opposed - no use of palm | _____ | 30 |

PELLET:

| | | |
|---|-------|----|
| 26 Tries to pick up pellet but cannot | _____ | 31 |
| 30 Picks up pellet by scooping it into palm | | |
| with his fingers | _____ | 32 |
| 35 Picks up pellet with several fingers | | |
| opposed to his thumb | _____ | 33 |
| 41 Picks up pellet with thumb & fore finger | _____ | 34 |

GIVE 1 OBJECT, THEN 2 OBJECTS:

| | | |
|---|-------|----|
| 24 Reaches more with one hand than with two hands | _____ | 35 |
| 26 Rotates wrists freely when holding object | _____ | 36 |
| 39 Brings two objects together in the middle | _____ | 37 |

HOLD AT SHOULDER:

| | | |
|------------------------------------|-------|----|
| 17 Holds hand steady | _____ | 38 |
| 18 Holds hand balanced when tilted | _____ | 39 |

INFANT ON HIS BACK:

| | | |
|---|-------|----|
| 19 Turns from back to side | _____ | 40 |
| 20 Raises head & shoulder to try to sit | _____ | 41 |
| 28 Rolls from back to stomach | _____ | 42 |
| 22 Pulls to sitting position | _____ | 43 |
| 36 Pulls to full standing position | _____ | 44 |
| 37 Raises self to sitting position | _____ | 45 |
| 38 Raises self to standing position(with support) | _____ | 46 |

INFANT ON HIS ABDOMEN:

| | | |
|---|-------|----|
| 33 Crawls 9 inches or more on abdomen or on hands and feet | _____ | 47 |
|---|-------|----|

INFANT STANDING:

| | | |
|-----------------------------------|-------|----|
| 34 Makes Stepping movements | _____ | 48 |
| 40 Walks with 2 hands hold | _____ | 49 |
| 42 Walks with one hand held | _____ | 50 |
| 45 Stands alone for a few seconds | _____ | 51 |
| 46 Walk alone-3 steps | _____ | 52 |
| 43 Sits Down intentionally | _____ | 53 |

| | | |
|---------------------|-------|----|
| 44 PLAYS PAT-A-CAKE | _____ | 54 |
|---------------------|-------|----|

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NUTRITION CRSP - KENYA PROJECT

Child's Name _____ Where test done: _____

Date: _____ Scorer: _____

Tester: _____

TODDLER COGNITIVE TEST (U-H)
SCALE I: OBJECT PERMANENCE

Child willing to reach for objects: Yes _____ No _____

SITUATION:

- | | | |
|---|-------|-------|
| 1. Finds an object hidden under 1 screen | | |
| Trial 1 | _____ | _____ |
| Trial 2 | _____ | _____ |
| 2. Finds an object hidden under 3 screens | | |
| Trial 1 | _____ | _____ |
| Trial 2 | _____ | _____ |
| 3. Finds an object hidden in cup and then under 1 screen | | |
| Trial 1 | _____ | _____ |
| Trial 2 | _____ | _____ |
| 4. Finds an object hidden in cup and then under 1 of 2 screens alternatively. | | |
| Trial 1 | _____ | _____ |
| Trial 2 | _____ | _____ |
| Trial 3 | _____ | _____ |
| 5. Finds an object hidden in hand and then under last of 3 screen. | | |
| Trial 1 | _____ | _____ |
| Trial 2 | _____ | _____ |
| Trial 3 | _____ | _____ |
| 6. Looks from last screen to first when object is hidden under first of three screens and hand continues empty. | | |
| Trial 1 | _____ | _____ |

On items 1, 2, & 3, do one more trial if child passes one trial and fails another.

On items 4, do one more trial if all passes are on one side or the other.

Item 6 is only presented if child passes item 5.

Child's Name _____

Where test done _____

Date: _____

Testers _____

TODDLER COGNITIVE TEST (U-H)
SCALE II: USE OF TOOLS (MEANS - ENDS)

YES/AFTER TESTER/NO

SITUATION

| | YES | DEMONSTRATES | NO |
|---|-------|--------------|-------|
| 1. Uses string to pull object along table | | | |
| Trial 1 | _____ | _____ | _____ |
| Trial 2 | _____ | _____ | _____ |
| 2. Uses string to pull object from floor | | | |
| Trial 1 | _____ | _____ | _____ |
| 3. Uses stick to get object | | | |
| Trial 1 | _____ | _____ | _____ |
| Trial 2 | _____ | _____ | _____ |
| 4. Bunches necklace to get in cup | | | |
| Trial 1 | _____ | _____ | _____ |
| Trial 2 | _____ | _____ | _____ |
| 5. Does not try to put blue ring on stick | | | |
| Trial 1 | _____ | _____ | _____ |
| Trial 2 | _____ | _____ | _____ |

On all items, do one more trial if child passes 1 trial and fails 1 trial.

Child's Name _____ Where done: _____

Date: _____

Tester: _____

TODDLER COGNITIVE TEST (U-H)
SCALE III VOCAL IMITATIONS

| <u>SITUATION</u> | Child: | Imitates | / No sounds |
|------------------------------------|--------|----------|-------------|
| 1. Examiner makes unfamiliar sound | | | |
| Trial 1 | _____ | _____ | _____ |
| Trial 2 | _____ | _____ | _____ |
| 2. Examiner says familiar word | | | |
| Word 1: | _____ | _____ | _____ |
| Word 2: | _____ | _____ | _____ |
| Word 3: | _____ | _____ | _____ |
| 4. Examiner says unfamiliar word | | | |
| Word 1: | _____ | _____ | _____ |
| Word 2: | _____ | _____ | _____ |
| Word 3: | _____ | _____ | _____ |

Child's Name: _____ Where test done: _____

Date: _____ Score: _____

Tester: _____

TODDLER COGNITIVE TEST (BAYLEY LANGUAGE)

| | | YES | NO |
|---------|---|-------------|--------------|
| 1. | Child points to his or her own shirt or pants | _____ | _____ |
| 2. | Child names objects: | | |
| | Bowl | _____ | _____ |
| | Cup | _____ | _____ |
| | Stick | _____ | _____ |
| | Spoon | _____ | _____ |
| | Baby | _____ | _____ |
| 3. | Child plays with dolls: | | |
| | Feeds doll | _____ | _____ |
| | Covers doll | _____ | _____ |
| | Wipes doll's Face | _____ | _____ |
| 4. | Child points to parts of the doll: | | |
| | Head | _____ | _____ |
| | Neck | _____ | _____ |
| | Legs | _____ | _____ |
| | Face | _____ | _____ |
| | Shirt | _____ | _____ |
| | Hands | _____ | _____ |
| | Finger | _____ | _____ |
| 5. | Child gives correct object: | | |
| | Bowl | _____ | _____ |
| | Can | _____ | _____ |
| | Cup | _____ | _____ |
| 6. | Child puts spoon on the cup: | | |
| | In the cup | _____ | _____ |
| | Under the bowl | _____ | _____ |
| 7. | Child puts one stick on the cloth | _____ | _____ |
| 8. | Child names and or points to pictures | <u>NAME</u> | <u>POINT</u> |
| Card 1: | Cat Hen's | _____ | _____ |
| | Banana | _____ | _____ |
| | Bottle | _____ | _____ |
| | Chair | _____ | _____ |
| Card 2: | Fire | _____ | _____ |
| | Bicycle | _____ | _____ |
| | Knife | _____ | _____ |
| | Basket | _____ | _____ |
| | House | _____ | _____ |
| | Shirt | _____ | _____ |

11

Child's Name: _____

Where test done: _____

Date: _____

Score: _____

Tester: _____

TODDLER COGNITIVE TEST (BAYLEY LANGUAGE)

| | <u>OBSERVED</u> | <u>MOTHER REPORTS</u> | <u>NO</u> |
|-----------------------------------|-----------------|-----------------------|-----------|
| 9. Child uses two or more words: | _____ | _____ | _____ |
| Uses gesture to make wants known: | _____ | _____ | _____ |
| Uses words to make want known: | _____ | _____ | _____ |
| Uses sentences of two words: | _____ | _____ | _____ |

TODDLER COGNITIVE TEST (U-H)

SCALE VI: PLAY

SCHEMES SHOWN:

| | <u>YES</u> | <u>NO</u> |
|--------------------------------|------------|-----------|
| 1. Puts one object in another | _____ | _____ |
| 2. Does some play activity | _____ | _____ |
| <u>Sweeps</u> | _____ | _____ |
| <u>Drives Car</u> | _____ | _____ |
| Necklace on neck | _____ | _____ |
| <u>Dolls play</u> | _____ | _____ |
| <u>List:</u> | _____ | _____ |
| 3. Shows toy to another person | _____ | _____ |
| 4. Names objects | _____ | _____ |

REMAINING BAYLEY ITEMS (24 + 30 MONTHS OLDS) Pass=1 Fail=2

- 1) Pegs (3 trials) _____
Passed in 70 seconds _____
42 seconds _____
30 seconds _____
22 seconds _____
- 2) Blue board (1 trial)
Places 2 round blocks _____
Places 2 round & 2 square blocks _____
Places 6 blocks _____
Completes correctly in 150 seconds _____
Completes correctly in 90 seconds _____
Completes correctly in 60 seconds _____
- 3) Blocks (3 Trials)
House of 3 cubes _____
House of 6 cubes _____
House of 8 cubes _____

Car of cubes (1 trial) _____
- 4) Pink board (1 trial)
Places round blocks _____
Places all blocks _____
All blocks placed in reverse _____
- 5) Crayon
Imitates crayon stroke _____
Differentiates scribe from stroke _____
Imitates strokes : vertical &
horizontal _____

6) Hiding

Matchbox - Passes 1 trial
 2 2 trials
 3 trials
Key passes 1 trial
 2 trials
 3 trials

7) Broken doll

Mends marginally
 approximately

 Exactly

_____ (head on
 body)
_____ (head on shoulder
 in any position)
_____ Correct

8) Folding paper (2 trials)
credit with ⁰~~1~~ more folds

IRIS HUNT (1 Pass; 2 Fail)

Object Permanence (Pass=2 trials)

| | | |
|---|-----|------|
| One screen..... | ___ | (22) |
| Three screens | ___ | (23) |
| In cup-under 1 screen | ___ | (24) |
| In cup-alternate screens | ___ | (25) |
| In hand-displace under last of 3 screens | ___ | (26) |
| In hand-displace under first screen (one trial) | ___ | (27) |

Beans - Ends (Pass = 2 trials)

| | | |
|-----------------------------|-----|------|
| Uses string horizontally | | |
| without demonstration | ___ | (28) |
| with demonstration | ___ | (29) |
| Uses string vertically | | |
| without demonstration | ___ | (30) |
| with demonstration | ___ | (31) |
| Uses stick | | |
| without demonstration | ___ | (32) |
| with demonstration | ___ | (33) |
| Bunches necklace | ___ | (34) |
| Avoids blue ring | ___ | (35) |

BAYLEY ITEMS (1 Pass, 2 Fail)

| | | |
|---|-----|------|
| 3 Says 2 words (#9) observed..... | ___ | (44) |
| Mother reports | ___ | (45) |
| 6 Uses gestures to make wants known (# 9) obs.. | ___ | (46) |
| Mother reports | ___ | (47) |
| 7 Shows own clothing (# 1)..... | ___ | (48) |
| 4 Names 1 object (# 2) | ___ | (49) |
| 6 Follow 2 directions, doll (# 3) | ___ | (50) |

III Vocal Imitation

| | | |
|-------------------------------------|-----|------|
| 1. Imitates Unfamiliar sounds | ___ | (36) |
| 2. Imitates Familiar words..... | ___ | (37) |
| 3. Imitates Unfamiliar words | ___ | (38) |

IV SCHEMES .

| | | |
|---|-----|------|
| 1. Puts one object in another | ___ | (39) |
| 2. Number of play activities | ___ | (40) |
| (None=1, One=2, Two=3, Three=4, Four=5) | | |
| 3. Some doll play | ___ | (41) |
| 4. Shows toy to another person | ___ | (42) |
| 5. Names objects | ___ | (43) |

BAYLEY BEHAVIOUR RECORD

| | | |
|---|-----|------|
| 1) Responsiveness to Examiner (1-5) | ___ | (69) |
| 2) Cooperativeness (1-9) | ___ | (70) |
| 3) Fearfulness (1-9) | ___ | (71) |
| 4) General Emotional Tone (1-9) | ___ | (72) |
| 5) Responsiveness to objects (1-9) | ___ | (73) |
| 6) Imaginative play (1-2) | ___ | (74) |
| 7) Attachment to object (1-2)..... | ___ | (75) |
| 8) Goal Directedness (1-9) | ___ | (76) |
| 9) Attention span (1-9)..... | ___ | (77) |
| 10) Endurance (1-9)..... | ___ | (78) |
| 11) Judgement of the Test (1-5) | ___ | (79) |
| 12) Unusual of Deviant Behavior (1-2) | ___ | (80) |

INSTRUCTIONS FOR SCHOOL AGE TESTING

Introduce yourself to the family and explain that you have come to do some activities with the TI. Ask the caregiver if the child feels well. Try to find a place in the house with a table and ask the other children to wait outside. Try to test the child alone unless he or she is particularly shy or timid. First, ask the child to draw a picture of a person, the very best picture he or she can draw. Say "make the person like yourself" Allow the child to take as much time as they wish.

Next, administer the digit span-giving 1 second per number and pronouncing the numbers distinctly. Say " I am going to say some numbers. Listen carefully, and when I am through say them right after me". Administer both trials of every item. Discontinue after failure on both trials of any item. Then say "Now, I am going to say some more numbers, but this time when I stop I want you to say them backwards. For example, if I say 9-2-7, what would you say? If he responds correctly, say "That's right," and go on to the first item. If he fails say "No, you would say 7-2-9. I said 9-2-7, so to say it backward, you would say 7-2-9. Now try these numbers. Remember, you are to say them backwards, 5,6,3. Whether the child succeeds or fails, go on to the first item.

Next, do the Raven's matrices, using the attached instructions. You can modify these instructions to fit the child but remember to give the child some chance to change his decision on the first five trials of the first two sets.

The verbal meaning test should follow. Use the instructions and the set of words included. Do not change the words. Last, give the child the blocks and let him play with them for a few minutes (about 5). Then administer according to the directions.

DIRECTIONS FOR RAVENS MATRICES

- A1 "Look at this" points to the upper figure. "You see it is a pattern with a piece cut out of it. Each of these pieces (points to each in turn) is the right shape but only one of them is the right pattern. No. 1 is the right shape but is not the right pattern. No. 2 is not a pattern at all. No. 3 is quite wrong. No. 6 is nearly right but is wrong here (he points to the white piece). Only one is right. POINT to the piece which is right.
- A2) IF the child does not point to the right piece, the tester continues the explanation until the child attempts to grasp it. The tester then turns to problem A2 and says "now point to the piece which came out of the pattern". If the child fails to do so, the tester can redemonstrate problem A1 and ask him to do A2. If the problem is solved correctly, the tester turns to A3 and proceeds as before. IN TEST A4 before the child has time to point to one of the pieces, the tester says "look carefully at the pattern (he moves his finger across it) only one of these pieces is quite right. Be careful, look at each of them first (he points to each of the six pieces). Now point to the right one to go in here (she points to the space) When the child has pointed to one of the pieces, whether right or not, the tester says "Is that the right one to go in here?" (She points to the pattern and space to be filled). If the child says "yes", the tester accepts his choice with approval whether right or wrong. If the child wants to change his mind, the tester says "well, point to the one that is right." (whether the child now chooses rightly or wrongly, the tester says "Is that the right one?". If the child is satisfied, his choice is accepted. If he is still in doubt, the tester says "well, which is the right one? and accepts the one then pointed as the child's final decision.

Problem A5 - same way as A4

At any stage between A1 and A5, the tester can use problem A1 to illustrate what a child has to do and then ask him to try again.

- A6 "Look at the pattern carefully. Now which of these pieces (he points to each in turn) goes in here (she points to the space). Be careful, only one is right. Which one is it? Be sure you find the right one, before you point to it. "

Problems Ab

"You see how it goes. Point to the right one to go here. Be careful. Look at each in turn; only one is quite right. Which one is it? In problems 1-5 of set Ab, after the child has pointed to one of the pieces, the tester says" Is that the right

one to complete this pattern? (he points to the pattern and the space to be filled). As before if the child say yes, the tester accepts his choice with approval.

If the child wants to change his mind, the tester proceeds as before in set A. After the 5th Problem, the child is not asked if the one he has chosen is right. Can say each time,

"Look carefully at the pattern (she points to each of the figures in turn and the space to be filled.) Be careful, only one of these pieces completes the pattern properly (she points to each in turn" which one is it?

A.

ITEM A: Ava nirona mbica inya. Ningiuga "Karai ka migate"; Ungiorota Mbica i? Kuvitia: kana 'ka' ndigwiciria Tyo ni 'pani' kana karai ka migate; niguo? Taroria weega ringi. If correct continue with item B. Nimbica iriku ironania nderu? Nitwika undumwe na mbica cionthe. Ningueta kugo nawe nwanginya worete mbica iria ironania kana iragendani na kiugo. Nima?

1. Guturia maru
2. Mugathe
3. Kivurutano/Ruvuvo
4. Mbica ya gutava mithenya
5. Gukuua
6. Itunda
7. Ruthingo
8. Kuvinga
9. Maacini
10. Marua
11. Kunyonda
12. Mutino (either fire or snake)
13. Kanyaga/ya gukua aruaru
14. Mbaara/kurua
15. Gutua
16. Kurarama
17. Ruvua
18. Kurota
19. Kuviavia/kuviuva
20. mbaki/muthogoto
21. kuugiva
22. Thegene
23. Gwitika
24. Kurituva/kirito
25. Gucunjura
26. Kiviu/kugia na mwaki muno
27. Gicagi/itura
28. Muo
29. Waana/wiithi
30. Gutinia
31. igoro
32. Guoya - cat or boy in tree
33. ndumo/rutumo
34. Kugemia
35. Kimwe
36. Nyiingi
37. Koonza
38. kwigwa mwanya/kugaurania
39. Gwicura
40. Ikundo.

VERBAL MEANING

Presentation

Item A. Here you see four pictures. If I say "pan" which picture would you point at? If wrong: Well, no, I don't think that is a pan, do you? Just look carefully again. If correct continue with item B: Which picture goes with the word "moustache"? If wrong: No, that is not a moustache, is it? Where do you see a moustache? We'll do the same with the next pictures. I shall say a word and you must point out which picture goes with the word, right?

The following words are presented:

- | | |
|---------------|-----------------|
| 1. Kneeling | 21. Sharp |
| 2. Necklage | 22. Noise |
| 3. Wind | 23. Flowing |
| 4. Calendar | 24. Heavy |
| 5. Carrying | 25. Hanging |
| 6. Fruit | 26. Hot |
| 7. Wall | 27. Village |
| 8. Locking | 28. Life |
| 9. Machine | 29. Youth |
| 10. Letter | 30. Cutting |
| 11. Thirsty | 31. High |
| 12. Danger | 32. Afraid |
| 13. Ambulance | 33. Stiches |
| 14. Fighting | 34. Decorating |
| 15. Climbing | 35. Single |
| 16. Roaring | 36. Many |
| 17. Branch | 37. Rectangular |
| 18. Dreaming | 38. Separating |
| 19. Speed | 39. Full |
| 20. Tobacco | 40. Knot |

Time

No time limit. In the case of a considerable period of silence, examiner asks: *Look closely again. Which picture goes with this word?*

Notation

The square on the answersheet corresponding with the picture indicated by the child is marked.

Scoring

The raw score is calculated after subtraction of the number of wrong answers (i.e. the number of unmarked squares) from the maximum score of 40.

INSTRUCTIONS FOR ADMINISTERING THE BLOCK DESIGN

Design 1 Take four blocks in hand and say "see these blocks? They are all alike. On some sides they are all red; on some all white; and on some half red and half white. Turn the blocks to show the different sides. Then say, "I am going to put them together to make something with them. Watch me."

Arrange the four blocks slowly into the design shown on card 1, without exposing the card to the child. Then, leaving the model intact, give four other blocks to the child and say "Now make one just like mine." Start timing and allow 45 seconds.

If the child fails, say "Watch me again." Demonstrate a second time using the child's blocks. Afterwards, scramble the blocks but leave the examiner's model intact and say, "Now you try it again and be sure to make it just like mine." Start timing again and allow 45 seconds.

Design 2

Scramble all the blocks before continuing. Then assemble Design 2 behind a screen and present the model to the child in the completed form. Say "Now make one like this. Do it all by yourself this time." Allow 45 seconds. If the child fails on the first trial of Design 2, scramble the child's blocks and say "watch me do it." Leave the model before him, duplicating it with his blocks. After the demonstration scramble his blocks and say, "Now you try it." Again allow 45 seconds.

Design 3

Scramble the child's blocks and remove the blocks that served as a model. Put in their place the card marked 3. Say "This time we are going to put the blocks together to make them look like this picture (point to the card with Design 3). "Watch me first." Construct the design slowly, using the child's blocks and when finished say "You see, the tops of these blocks look the same as this picture. Scramble the blocks used in the demonstration and say "Now you look at the picture and make one just like it with these blocks 60 ahead." Allow 45 seconds.

If the child fails to complete the design, scramble the blocks and say, "Watch me again" make the design again; then scramble the blocks and say "60 ahead. See if you can do it this time." Again allow 45 seconds.

Design 4-11

Be sure the child has 4 blocks; scramble the blocks. Place the card with Design 4 before the child and say "Now make one like this. Try to work as quickly as you can. Tell me when you have finished." Start timing and allow 45 seconds.

22

Stop timing when the child is obviously through, even if the child neglects to tell the examiner. When the child has finished the design or at the end of the time limit, scramble the blocks. No second trials are given on Designs 4-11.

When Design 9 is reached, take the other 5 blocks out and say "Now make one like this, using 9 blocks."

SCORING

Design 1-3. 2 points for passing on the first trial; 1 point for passing on the second.

Design 4-11. Follow the scoring form. If the child rotates the design, correct it one time but score as a failure. Do not correct more than once.

Head = 1 point

Body = 1 point

Legs = 1 point

Arms = 1 point

Facial Features = 1 point

Any clothing = 1 point

Neck = 1 point

Hands = 1 point

Feet = 1 point

Fingers and/or toes = 1 point

Please attach drawings to other data

Child's Name: _____

Number: _____

Date: _____

Tester: _____

Birthdate: _____
Test date: _____

| BLOCK DESIGN Discontinue after 2 consecutive failures. | | | | | | |
|--|------|-----------|--|---|-------------|------------|
| Design | Time | Pass-Fail | Score (Circle the appropriate score for each design.) | | | |
| | | | 0 | 1 | 2 | |
| 1. 45" | 1 | | | | 2 | |
| | 2 | | 0 | 1 | | |
| 2. 45" | 1 | | | | 2 | |
| | 2 | | 0 | 1 | | |
| 3. 45" | 1 | | | | 2 | |
| | 2 | | 0 | 1 | | |
| 4. 45" | | | 0 | | 21-45 4 | 16-20 5 |
| 5. 75" | | | 0 | | 21-75 4 | 16-20 5 |
| | | | | | 11-15 6 | 1-10 7 |
| 6. 75" | | | 0 | | 21-75 4 | 16-20 5 |
| | | | | | 11-15 6 | 1-10 7 |
| 7. 75" | | | 0 | | 21-75 4 | 16-20 5 |
| | | | | | 11-15 6 | 1-10 7 |
| 8. 75" | | | 0 | | 26-75 4 | 21-25 5 |
| | | | | | 16-20 6 | 1-15 7 |
| 9. 120" | | | 0 | | 56-120 4 | 36-55 5 |
| | | | | | 26-35 6 | 1-25 7 |
| 10. 120" | | | 0 | | 76-120 4 | 56-75 5 |
| | | | | | 41-55 6 | 1-40 7 |
| 11. 120" | | | 0 | | 81-120 4 | 56-80 5 |
| | | | | | 41-55 6 | 1-40 7 |

Max.=62

Total

22 23

UNTIMED

24 25

| DIGIT SPAN (Discontinue after failure on both trials of any item. Administer both trials of each item, even if child passes first trial. | | | | | |
|--|-------------------|-----------|-------------------|-----------|---------------------|
| DIGITS FORWARD | | | | | Score 2, 1, or 0 |
| | Trial 1 | Pass-Fail | Trial 2 | Pass-Fail | |
| 1. | 3-8-6 | | 6-1-2 | | |
| 2. | 3-4-1-7 | | 6-1-5-8 | | |
| 3. | 8-4-2-3-9 | | 5-2-1-8-6 | | |
| 4. | 3-8-9-1-7-4 | | 7-9-6-4-8-3 | | |
| 5. | 5-1-7-4-2-3-8 | | 9-8-5-2-1-6-3 | | |
| 6. | 1-6-4-5-9-7-6-3 | | 2-9-7-6-3-1-5-4 | | |
| 7. | 5-3-8-7-1-2-4-6-9 | | 4-2-6-9-1-7-8-3-5 | | |
| Administer DIGITS BACKWARD even if child scores 0 on DIGITS FORWARD. | | | | | Max.=14 |
| Total Forward | | | | | |
| DIGITS BACKWARD | | | | | Score 2, 1, or 0 |
| | Trial 1 | Pass-Fail | Trial 2 | Pass-Fail | |
| 1. | 2-5 | | 6-3 | | |
| 2. | 5-7-4 | | 2-5-9 | | |
| 3. | 7-2-9-6 | | 8-4-9-3 | | |
| 4. | 4-1-3-5-7 | | 9-7-8-5-2 | | |
| 5. | 1-6-5-2-9-8 | | 3-6-7-1-9-4 | | |
| 6. | 8-5-9-2-3-4-2 | | 4-5-7-9-2-8-1 | | |
| 7. | 6-9-1-6-3-2-5-8 | | 3-1-7-9-5-4-8-2 | | |
| Total Backward | | | | | Max.=14 |

| | | |
|---------|----------|-------|
| Max.=28 | | |
| + | = | |
| Forward | Backward | Total |

25

COLOURED PROGRESSIVE MATRICES (1947)

J. C. Raven

| A | | | A _B | | | B | | |
|----|--|---|----------------|--|---|----|--|---|
| 1 | | 4 | 1 | | 4 | 1 | | 2 |
| 2 | | 5 | 2 | | 5 | 2 | | 6 |
| 3 | | 1 | 3 | | 1 | 3 | | 1 |
| 4 | | 2 | 4 | | 6 | 4 | | 2 |
| 5 | | 6 | 5 | | 2 | 5 | | 1 |
| 6 | | 3 | 6 | | 1 | 6 | | 3 |
| 7 | | 6 | 7 | | 3 | 7 | | 5 |
| 8 | | 2 | 8 | | 4 | 8 | | 6 |
| 9 | | 1 | 9 | | 6 | 9 | | 4 |
| 10 | | 3 | 10 | | 3 | 10 | | 3 |
| 11 | | 4 | 11 | | 5 | 11 | | 4 |
| 12 | | 5 | 12 | | 2 | 12 | | 5 |

PICTURE

Total Score
36 31

verbal
meaning

Total Score
32 33

| | | | |
|----|--|----|----|
| A | | 23 | 35 |
| B | | 27 | 36 |
| 1 | | 25 | 37 |
| 2 | | 26 | 38 |
| 3 | | 27 | 39 |
| 4 | | 28 | 40 |
| 5 | | 29 | |
| 6 | | 30 | |
| 7 | | 31 | |
| 8 | | 32 | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

COOPERATIVENESS

35

GOAL DIRECTEDNESS

39

ATTENTION SPAN

45

JUDGMENT OF TEST

41

Total Score
34 35

26

INSTRUCTIONS FOR ADULT TESTING

It would be preferable to visit the family before the testing and inquire when the individual will have the time to spend with the examiner. Explain that you will need about 45 minutes and that it should be a time when young children are asleep or cared for by others. In the case of the adults, you will need to find a time when they will be uninterrupted.

Try to find a place in the house with a table where the subject can be seen alone. Do the digit span first. Say "I am going to say some numbers Listen carefully and when I am through say them right after me." Discontinue after failure on both trials of any item. Then say, "Now I am going to say some more numbers, but this time when I stop I want you to say them backwards. For example, if I say 7-1-9, what would you say." If the subject responds correctly, say, "That's right." If the subject responds incorrectly, say "No, you would say 9-1-7. I said 7-1-9, so to say it backwards, you would say 9-1-7. Now try these numbers. Remember, you are to say them backwards. 3-4-8. Then proceed to item 1.

Next do the Porteus Mazes, following the instructions that I will send. Then do the similarities subtest. Say to the individual, "In what way are an orange and a banana alike." If the subject replies that they are both fruit, say "Good." and go to the next item. If the subject says "You eat them both." say "That's right, you do eat them both also, they are both fruit. If the subject gives an incorrect response or a difference, say "They are both fruit, you eat them both." and go on to the next item. Each item should be phrased in the same way "In what way are a _____ and _____ alike?" Write down the subject's whole answer.

BLOCK DESIGN FOR ADULTS

Say "You see these blocks?" They are all alike. On some sides, they are all red; on some, all white; and on some, half red and half white." Turn the blocks to show the different sides. Then say, "I am going to put them together to make a design. Watch me." Arrange the four blocks slowly into the design shown on card 1, without exposing the card to the subject. Then, leaving the model intact, give four other blocks to the subject and say, "Now make one just like this." Start timing and allow 60 seconds. If the subject fails, say, "Watch me again." Demonstrate a second time using the subject's blocks. Afterwards, scramble the blocks, but leave the examiner's model intact and say, "Now you try it again and be sure to make it just like mine." Start timing again, and allow 60 seconds. Whether the subject succeeds or fails on the second trial, proceed to Design 2. If the subject tries to duplicate the examiner's model exactly, including the sides, tell him that only the top needs to be duplicated.

Design 2

Scramble the subject's blocks. Remove the blocks that served as a model for Design 1 and put in their place the card marked "2". Say "This time we are going to put the blocks together to make them look like this picture." Scramble the blocks used in the demonstration and say "Now look at the picture and make one just like it with these blocks. Go ahead." Allow 60 seconds. If the subject successfully completes the design within the time limit, proceed to Design 3. If the subject fails, scramble the blocks and say "Watch me again." Make the design again, then scramble the blocks and say "Now try it." Allow 60 seconds. Whether the subject succeeds or fails on the second trial, proceed to Design 3.

27

Design 3-9

Scramble the blocks. Place the card for Design 3 before the subject and say "Now make one like this. Try to work as quickly as you can. Tell me when you have finished." Start timing and allow 60 seconds. The examiner should stop timing when the subject is obviously through even if the subject neglects to tell the examiner. When the subject has finished the design or at the end of the time limit, scramble the blocks. No second trials are given on Design 3-9. When design 6 is reached, take the other 5 blocks out and say, "Now make one like this, using nine blocks. Be sure to tell me when you have finished." For Design 9, do not permit the subject to rotate the card to give the design a flat base.

Scoring

Designs 1-2; 2 points for passing on the first trial; 1 point for passing on the second. If the suspect rotates a design, correct it but score as a failure. Only one correction like this may be given during the test.

B.

SIMILARITIES : 'URUMWE'

1. Icuungwa - ndigu
2. Ngui/ngiti - ciimba .
3. muvuto - Cati
4. Mucikiri - Ngaari
5. Riitho - Gutu
6. Kivungo - nyororo
7. Irathiro - ithuiro
- 8.
9. Metha - giti
10. Rieva - manji
- 11.
12. Wira - Kuthaaka
13. Kuguruka - muti
14. kugathiriria - ivera

DIGIT SPAN

Discontinue after failure on BOTH TRIALS of any item.
Administer BOTH TRIALS of each item, even if subject passes first trial.

| DIGITS FORWARD | | Pass-Fail | Score 2, 1, or 0 | DIGITS BACKWARD* | | Pass-Fail | Score 2, 1, or 0 |
|----------------------|-------------------|-----------|---------------------|-----------------------|-----------------|-----------|---------------------|
| 1. | 5-4-2 | | | 1. | 2-4 | | |
| | 6-9-4 | | | | 5-8 | | |
| 2. | 6-4-3-9 | | | 2. | 6-2-9 | | |
| | 7-2-8-6 | | | | 4-1-5 | | |
| 3. | 4-2-7-3-1 | | | 3. | 3-2-7-9 | | |
| | 7-5-8-3-6 | | | | 4-9-6-8 | | |
| 4. | 6-1-9-4-7-3 | | | 4. | 1-5-2-8-6 | | |
| | 3-9-2-4-8-7 | | | | 6-1-8-4-3 | | |
| 5. | 5-9-1-7-4-2-8 | | | 5. | 5-3-9-4-1-8 | | |
| | 4-1-7-9-3-8-6 | | | | 7-2-4-8-5-6 | | |
| 6. | 5-8-1-9-2-6-4-7 | | | 6. | 8-1-2-9-3-6-5 | | |
| | 3-8-2-9-5-1-7-4 | | | | 4-7-3-9-1-2-8 | | |
| 7. | 2-7-5-8-6-2-5-8-4 | | | 7. | 9-4-3-7-6-2-5-8 | | |
| | 7-1-3-9-4-2-5-6-8 | | | | 7-2-8-1-9-6-5-3 | | |
| Total Forward | | | Max=14 | Total Backward | | | Max=14 |

*Administer DIGITS BACKWARD even if subject scores 0 on DIGITS FORWARD.

| | | | | |
|---------|---|----------|---|---------------|
| | + | | = | |
| Forward | | Backward | | Total |
| | | | | Max=28 |

PORTEUS MAZE TEST SCORE SHEET

NAME _____

ORIGINAL MAZES (Vineland Revision)

MENTAL AGE SCORE

| Test | Trials | Deduct | Test | Trials | Deduct |
|------|--------|--------|-------|--------|--------|
| VII | | | XI | | |
| VIII | | | XII | | |
| IX | | | XIV | | |
| X | | | Adult | | |

Maximum Score _____ Test Age _____ Deduct _____ T.Q. _____

QUALITATIVE SCORE

| Error | First 3rd | Last 3rd | Cut Corner | Crossed Line | Lift Pencil | Wavy Line | Wrong Dir. | Year VII |
|-----------------|-----------|----------|------------|--------------|-------------|-----------|------------|----------|
| Weight | 2 | 1 | 1 | 2 | 3 | 2 | 1 | 1 |
| No. | | | | | | | | |
| Weighted Scores | | | | | | | | |

Total Qualitative Score _____

EXAMINER _____

30

| 11. SIMILARITIES | Discontinue after 4 consecutive failures. | Score 2, 1, or 0 |
|-----------------------|---|---------------------|
| 1. Orange—banana | | |
| 2. Dog—lion | | |
| 3. Coat—suit | | |
| 4. Boat—automobile | | |
| 5. Eye—ear | | |
| 6. Button—zipper | | |
| 7. North—west | | |
| 8. Egg—seed | | |
| 9. Table—chair | | |
| 10. Air—water | | |
| 11. Poem—statue | | |
| 12. Work—play | | |
| 13. Fly—tree | | |
| 14. Praise—punishment | | |
| Total | | Max=28 |

| BLOCK DESIGN | | Discontinue after 3 consecutive failures. | | Score (Circle the appropriate score for each design.) | | | |
|--------------|------|---|---|--|------------|------------|---------------|
| Design | Time | Pass-Fail | | | | | |
| 1. 60" | 1 | | 2 | | | | |
| | 2 | | 0 | 1 | | | |
| 2. 60" | 1 | | 2 | | | | |
| | 2 | | 0 | 1 | | | |
| 3. 60" | | | 0 | 16-60 4 | 11-15 5 | 1-10 6 | |
| 4. 60" | | | 0 | 16-60 4 | 11-15 5 | 1-10 6 | |
| 5. 60" | | | 0 | 21-60 4 | 16-20 5 | 11-15 6 | 1-10 7 |
| 6. 120" | | | 0 | 36-120 4 | 26-35 5 | 21-25 6 | 1-20 7 |
| 7. 120" | | | 0 | 61-120 4 | 46-60 5 | 31-45 6 | 1-30 7 |
| 8. 120" | | | 0 | 76-120 4 | 56-75 5 | 41-55 6 | 1-40 7 |
| 9. 120" | | | 0 | 76-120 4 | 56-75 5 | 41-55 6 | 1-40 7 |
| Total | | | | | | | Max=51 |

51

MANUAL FOR INFANT INTERACTION OBSERVATION

It is advisable to visit the family one or two days prior to the observation to inquire about the infants sleeping schedule so you can avoid a prolonged sleep period. On the day of the visit explain that you will sit or stand out of the way so as not to interfere with anyone.

Definitions

1. Care - any behaviour which another adult or child does to the infant to care for him physically. Examples are feeding, washing, changing clothes, or putting to sleep. Only code while the activity is on going.
2. Carry on back or in arms or hold in arms or on lap.
3. Touch all touching that is not included in carry or hold. Examples are someone leaning over the infant and touching him when the mother is holding him.
4. Talk to the infant - Each time an adult or child vocalizes or talks directly to the infant, directed to the infant means that the speaker is looking directly at the infant while talking holding the infant while actively interacting, or calling the infant by name. The speaker does not have to use words.
5. Look at each other - The infant and another person are looking at each other's faces.
6. Infant Vocalizes - babbling sounds which do not seem to express distress. Look at facial expression to help code.
7. Infant cries/whines - vocalization which seem to express distress or unhappiness.
8. Infant smiles/laughs - Facial expressions that show happiness or pleasure.

RESPONSE TO VOCALIZE - CRIES WHINES

1. Vocal Response - Adult or child responds to the toddler's vocalizations with some type of vocal response within about 5 seconds. The responder does not need to look at the infant but must be closer enough so that the child can hear responses and not involved in conversations with others.
2. Physical response - Adult or child approaches the infant or changes on going behaviour while touching the infant after he begins to cry

Other codes

9. Out of view - when you cannot see the child for the entire 30 second recording period, write 9 in every box across the page.
10. Missing data - The major reason for missing data will be that the infant falls asleep. The definition for sleeping is that the infant has his eyes closed for more than 2 minutes and is not crying. If you have more than 15 minutes of missing data, you will have to return

NUTRITION CRSP - KENYA PROJECT: INFANT INTERACTION ACTIVITIES Form Draft: Main Study 31/1/84 djc/ms/bn

HH Number: 11/1/2 Date: 15/2/84 Visit No.: 0/1/1 TI No.: 2/1/1 Enum. No.: 0/9/1

Form No.: 1/1/1 End: 12.27 PAGE 2 of 2
 TI Name: GIITARI WA F.U.U. Enum Name: JOSEPH

| General care | CONTACT | | | INTERACTION CODES | | BABY CODES | | |
|--------------|-------------------------|-------|--------------------|-------------------|-----------|-------------|-------|---------------|
| | Carry back-Arms or Hold | Touch | Look at Each other | Talk to Baby | Vocalizes | Cries/Frets | Smile | 1=No 2=Yes |
| 1 | 2 | 1 | 1 | 1 | 1 | 5 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 5 | 1 | 1 |
| 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 1 |
| 1 | 2 | 1 | 1 | 2 | 1 | 5 | 1 | 1 |
| 2 | 2 | 1 | 2 | 1 | 1 | 5 | 1 | 1 |
| 2 | 2 | 1 | 2 | 1 | 1 | 5 | 1 | 1 |
| 2 | 2 | 1 | 1 | 1 | 1 | 5 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 5 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 5 | 1 | 1 |
| 1 | 4 | 1 | 1 | 1 | 1 | 5 | 1 | 1 |
| 1 | 4 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| 2 | 2 | 1 | 1 | 2 | 1 | 5 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 1 | 2 | 2 | 1 | 5 | 1 | 1 |
| 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |

INTERACTION-

1. alone/no one
2. mother
3. father
4. older sis
5. older bro
6. grdparent
7. more than one person
8. other adult
9. other child

Vocalizes/Cries

1. None
2. Vocal Response
3. Physical Response
4. Both responses
5. None

9 = Out of View
 0 = Missing Data

MANUAL FOR TODDLER INTERACTION OBSERVATION

Greet the family and explain that you have come to observe the toddler as he or she goes about a usual day. Explain that you will sit or stand out of the way so as not to interfere with anyone and that you will follow the child if he or she moves about. The time sampling sequence is 30 seconds of observation and 30 seconds of recording time.

DEFINITIONS FOR TODDLER INTERACTION ACTIVITY CODING

1. Care - Any behavior which another adult or child does to the toddler to care for him physically. Examples are feeding, washing, changing clothes, toileting, putting to sleep. Only code while the activity is ongoing. If the mother gives the child food, code care when this food is offered but not while the child eats alone.
2. Carry on back or in arms or hold in arms or on lap. Holding, picking up, or carrying means the child's feet must be off the ground or he must not be supporting his own weight.
3. Touch - when anyone touches any part of the child. Examples are two children holding each other's arms or an adult holding the toddler's hand while walking or putting an arm around toddler's shoulder.
4. Talk to child - Each time an adult or child vocalizes or talks directly to the child. Directed to the toddler means that the speaker is looking directly at the toddler while talking, holding the toddler while actively interacting or talking to the toddler and using names.
5. Social interaction - child is actively involved in some type of activity with adults siblings, or peers. The child simply watching while others do things is not social interaction. Several toddlers sitting together and not talking or playing is not social interaction.
6. Play with objects - any use of objects in play.
7. Toddler Vocalizes - The child's vocalizations must involve talking sounds or babbling. Sneezing, laughing, whining, grunting, burping would not count. Words are not important - babbling is fine.
8. Toddler cries/whines - vocalizations which express distress and unhappiness.
9. Toddler smiles/laughs - facial expressions that show happiness or pleasure.

RESPONSE TO VOCALIZES - CRIES/WHINES - SMILES/LAUGHS

1. Vocal Response - Adult or child responds to the toddler's vocalizations with some type of vocal response within about 5 seconds. The responder does not need to look at the child but must be close enough so that the child can hear responses and not involved in conversations with others. Picking up the child, feeding or giving an object would not count as a vocal response...
2. Physical response - must involve an adult or child going over to the child and doing something directly while touching the child. Handing food to the child, feeding the child, holding the child and hitting or kicking the child would be examples of physical responses.

PLAY WITH OBJECTS

Simple manipulation or relational play - waving an object, banging, or putting object in mouth or any bringing together of two objects that is not using them in the usual way.

Functional play - any use of an object or two or more objects in the way they are usually used. Putting spoons in bowl, putting necklace on neck or on sibling, putting head scarf on head.

Symbolic play - pretending to use one an object as another or pretending that something is in an empty object. Putting soil in a cup is an example. Pretending that a stick or a doll is a person acting in some way also counts as symbolic play.

The major reason for "missing data" is if the toddler leaves the neighbourhood and you cannot follow. If the toddler falls asleep, you will have to enter missing data for the remaining part of the session. If you have more than 15 rows of missing data, you will have to return later in the day or the following day. At that point, start a new code sheet but only record for the missing time period.

OTHER CODES

Toddler out of view: This is code 9 and is only used when during the 30 seconds of observation, you cannot see the child. To indicate 'out of view' write 9s in each box across the page for the appropriate time period. Try to find the child during the 30 sec recording time. An observation period in which a child goes into a room in the house where you cannot follow for the entire 30 seconds should be coded 9 even if you can hear talking. If a child is out of view for only part of the 30 seconds, you do NOT use this code; you record those activities, interactions, etc you do see happening and disregard the few seconds the child was out of your sight.

Missing data code: This code should be used as little as possible. Missing data means you can't get the data. Since you are observing/recording by 1-minute intervals, you can stop for a minute or two if something goes wrong (you drop your pencil, you get interrupted by someone else, etc) and then begin on the next zero-zero cycle, filling the form in the following line.

For example, if you drop your pencil after completing minute 3, you wait till your watch again reaches 0-0 and you start observing/then recording for minute four.

NUTRITION CRSP-KENYA PROJECT: INTERACTION ACTIVITIES FORM Draft: Main Study 3/2/84 djc/ms

HH Number: 41015/2 Date: 10/12/84 Visit No: 1 TI No: 1 Enum. No.: 013/0

Form No.: 1/1 TI Name: De. N. J. J. J. Enum Name: Joe J. J. J.

Time Start: 2:05 End: 2:45 PAGE 2 OF 2

| | INTERACTION CODES | | | | PLAY | | TODDLER | |
|----|---------------------------------|--------------------------|---------------|---------------------|----------------|--------------------|---------|--|
| | Min. general on Care or in Arms | CONTACT Hold Carry Touch | TALK TO CHILD | SOCIAL Inter-Action | PLAY WITH OBJS | VOCAL-cries/whines | SMILES | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |

CODES

INTERACTION-

1. alone/no one/none
2. mother
3. father
4. Older sister(s)
5. Older brother(s)
6. Grandparent(s) (More than 1 per)
7. Other adult(s)
8. Other child(s)
9. ~~Other~~

PLAY WITH OBJECTS-

1. None
2. Simple manipulation or relational
3. Functional
4. Symbolic

VOCALIZES/cries-whines

1. None
2. vocal - Response
3. Physical - Response
4. Both-vocal & physical
5. No response

OUT OF VIEW = 9

MISSING DATA = 0

The child still is sleep.

MANUAL FOR CLASSROOM OBSERVATIONS

You will be observing two target school children in each class period on a 10 second observe - 20 second record schedule. This means that you will begin observing the first target child when your digital watch reads 00 seconds and the second target child when your digital watch reads 30 seconds. You will continue observing until the class period is over. Each child will be observed in 3 class periods, unless the total time in class over 3 periods is less than 90 minutes. In this case, you will have to observe the child for an additional class period.

If there is only one target child in a class, pick another child but do not record his data. You do not want to collect all the data on any child in just one class period because there may be one particular subject in which he is especially interested or uninterested. Try to make your observations not too obvious so the children will not become self-conscious.

You will code by placing an x in the box referring to a particular code and will move down and across the code sheet in terms of recording, any of the specific behaviors designated should be recorded. However, if a behavior occurs more than once in a 10 second interval it is not recorded again. For example, if a child was talking to a neighbour for the first 3 seconds,, looked around the room for next two and then went back to talking to a neighbour for the remaining 5 seconds, the child would only be scored once for talking, for that 10 second interval. Note that duration of behaviour is unimportant. (Except for code 3- see below). A behaviour is recorded as occurring regardless of duration. You should write down the names of the target children on the code sheets prior to observation.

Code 1: Talk.

Description: This code refers to the occurrence of non-permitted vocalizations between the target child and other children. To code talk the target child must look toward another child. Since most vocalizations by the target child will probably not be heard by the observer look for the following behaviours:

- 1) Target child is looking at another child and you see the target child lips move.
- 2) Target child is looking at another child and you see the other child's lips move (this means that you can score talk even if the child is not talking as long as the child is involved in a conversation).
- 3) The target child is between two other children who are talking and the target child is actively listening to conversation.

Do not code talk if the following behaviours occur.

- 1) Vocalizations directed toward the teacher, regardless of the content of the vocalizations.
- 2) Permission is given by the teacher for the target child to talk to another child (for example the teacher asks a child to correct another child).
- 3) Vocalization is part of a religious ritual or class recitation.

Code 2: Play

Description: This code refers to the child playing (manipulating) objects and also actively touching another child or children. The objects can be things the child has brought to school or things, that are already in school or that other children have brought. What is central in coding play is that the child must be paying attention to the object being played with and not to what is going on in the classroom. Examples of play would include: Waving pencil through the air as if it were an airplane; using pencil to poke holes in the workbook; kicking a piece of paper around on the floor. Playing with pencil on workbook instead of using it to follow recitation. Do not score play if the following conditions occur:

- 1) The child is manipulating an object or touching another child or children but the child's attention is focused on the teacher or on the work 2) The teacher has given the children permission to use objects in certain ways (for example, drawing in workbooks).

Code 3: Off-task.

Description: This code refers to the child not doing work or not attending for the entire 10 seconds of observation. Not doing work could involve the following behaviours:

- 1) Not writing or reading when assigned; 2) working on material other than what the class is working on (for example coloring in the workbook when the class is working on language); 3) Not reciting out loud during class recitation or not raising hand to volunteer when the teacher asks a question of the class; 4) any combination of these which add up to 10 seconds.

Not attending could also involve the following behaviour:

- 1) child's eyes are pointing in a direction other than where the teacher is or where the assigned work is (for example, child may be looking outside or toward another child who is not then answering a question). Combinations of not doing work and not attending which add up to 10 seconds are scored off-task off-task. Do not score if the following conditions occur:

- 1) Child seems to be looking at work but observer feels that child isn't really thinking about his work—such inferences are not acceptable as a reason for coding off-task;
- 2) Child is looking at another child who is answering a question asked by a teacher;
- 3) Child has hand raised to answer a question—even if child is not looking directly at teacher when hand raised;
- 4) Teacher has specifically given child permission to rest or do something else while rest of class works.
- 5) Child is not off-task for the full 10 seconds of the observation.

Code 4: Out of room Designate by 0.

Description: This code refers to anytime the child is out of the classroom for any reason whatsoever. It does not matter if the teacher has given the child permission to be outside. Score anytime the child is outside the class it does not have to be for the full ten seconds.

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Code 5: None of the above. Designate by N.

Description: If none of the above have occurred code N for the cycle under observation.

Summary Scoring.

Once the observation period is over check your coding sheet. You should have a code for every target child for each 10 second observe, 20 second record cycle. You can have as many as 4 codes for each cycle. Your summary score will be based on the totals for all cycles in which both target children have been observed.

Add the χ^2 's in each category for each child in the box and place the sum beneath the category.

PLAY GROUND OBSERVATION

Each target child will be observed for a total of 40 seconds in the playground. In those cases in which the child is on the playground in unstructured activities for less than 40 minutes, you will have to return to school the next day to complete your observations. Physical education is not included in the playground observation since the activities are usually structured by a teacher.

The child will be observed for a cycle of 30 seconds observe, 30 seconds record. In each period, the observer places "x's" in the boxes next to those behaviours which occur in marked once and only once in a 30 second interval even if it occurs repeatedly during the observation. The minutes will be labelled across the top and you will code down the form for each minute.

Try to make your observations of each target child as unobvious as possible like many of us, school aged children do not like to be watched and will run away if you stare too intently at them. Because you are only observing one child at a time, try to watch the child out of the corner of your eye as if you were looking at other children.

Specific Behaviour Categories

A. Behaviour towards other children

In each interval the observer places an "x" in the appropriate box or boxes to indicate any behaviours which the child directs to another child. Any behaviour may be coded once in any 30-second interval.

(1) Initiates interactions. Behaviour which is friendly in nature and appears to be guided by the child's attempts to establish interactions with other children. It includes greeting behaviours and joining a group to participate in a game or other activity. It is not scored when the child is already involved in a group activity unless the child shifts to a new activity. Examples would include the following: Joining a group or child who is engaged in some activity. Other examples include: Reaching for another child's hand or smiling into someone else's face, or getting another child to join the TI as the TI runs, or motioning to another child.

(2) Positive response to interaction bid from another child: Behaviour which follows a specific request from another child and which is positive in nature. Could include the child providing materials or help when these are asked for. Examples would include the following: Telling another child who has asked to join a group to hurry and join the game. Other examples include: Taking another child's hand, smiling in return, running along with someone else and joining a child who has _____ to you.
Answering another child when spoken to in a friendly voice.

(3) Negative response to an interaction bid from another child. Behaviour which follows a specific request from another child and which is negative in nature. Could include the child refusing materials or help when these are asked for. Examples would include the following: Telling a child who has asked to join a group to "go away" or "you can't play with us." Other examples include: Protesting when lifted by play mate, pulling away from a child who has reached toward you, turning away from a child who has approached the TI, failing to respond when called.

(4) Seeking help. Behaviour which is used to get some type of help for the child. It includes requests for direct help from another child or requests

seeking (code number 11) in that the child appears to have a genuine need or problem and is not simply trying to get attention from other children.

Examples would include the following: If someone is attacking the child; The child asks its group leader or an older sib to get the attacker away. The child is attempting a task that is too difficult for the child and asks other children to help in completing the task. Other examples would include: Seeking help in setting up a game or using an object.

(5) Caretaking (helping) behaviour. Behaviour designed to give physical or emotional help to another child. Differs from positive response to interaction (code number 2) in that there has previously been distress shown by another child or a request to the child or a group in which the child is in for help. Includes offering assistance to another child when requested, giving up materials or food, offering of sympathy or comfort to a child who is upset. Includes smiling at another child if the intent is to offer emotional support or encouragement, or behaviour intended to distract an unhappy child from its unhappiness. Examples would include: Taking a distressed child to an adult, suggesting to a child who appears tired that they ought to rest, gathering around a child who appears to be distressed or asking the child if they need help, helping another child who appears is being attacked to fight off its attackers, helping another child complete a task when asked, or sharing food with a child who appears to be hungry. Other examples include: Responding to crying sympathetically, brushing each other's hair.

(6) Involvement in physical or verbal aggression. Behaviour which is designed to hurt another person. This may involve hitting, shoving, kicking or biting another child. Can also include taking of a desired object from another child or interfering with another child activities (unless this is part of a group game where the aim is to get something away or stop another child - in this case score the behaviour under code 12).

This category can also include threatening another child with physical gestures. Example would include the following: Running up and hitting another child, starting a fight with another child, hitting another child with a ball (but not as part of a game), grabbing away another child's piece of bread.

Verbal aggression includes behaviour which is designed to humiliate, verbally threaten or criticize another person so that they feel bad. Can also include verbally challenging another person or verbally frightening another person. Examples would include the following: telling one child that another child does not like them and is not their friend, telling another child to go away or they will be hit, or telling another child that they are stupid.

(7) Involved in ^{ongoing activities} interaction. Child is part of an ongoing activity with another child or group of children.

(8) Solitary or isolate behaviour. Involves behaviour where the child is not part of a group. Can include the child playing in an imaginative way by itself, watching other kids play. May also include the child being rejected by other children when attempts to join a group.

Examples would include the child eating a piece of bread in a corner watching other children playing football or the child by itself jumping up and down or the child moving toward another group of children and being told to go away. Other examples would include: Child being with a group but ignored and very apologetic.

(9) No behaviour. Check here if ^{organizing behaviour} nothing has been recorded above.

(13)

B. Behaviour with Adults

In each interval the observer places an "x" in the appropriate box to indicate whether and to what degree the child is making contact with adults. Any adult present may be interacted with by the child and thus coded. There are only four coding categories. If, in any interval, the child talks with an adult, or stands next to the adult looking at the adult or gives an object or initiates a game with the adult, variable 1, Seeks attention, is marked. If the child makes physical contact (touching adult) with an adult or attempts to make physical contact, variable 2, Seeks Physical Contact is coded. Variables 1 and 2 may both be coded in the same interval. If it appears that an adult has initiated contact with the child, variable 1 should be coded if the child talks, looks, or listens and variable 2 should be coded if the child makes physical contact with the adult.

If neither variable 1 nor 2 is coded, the observer must enter an "x" in category 3, Dosen't Seek Adult. If no adult is present with whom the child can interact score category 4, No Adult.

C. Level of Activity

In each interval, after every 30 seconds, the observer places an "x" in one and only one box to indicate the subject's characteristic level of activity for that interval (that is, the activity level that most characterizes the child during the observation interval). Definitions are:

1. Very low. The subject shows little vigor in his or her physical movements, appearing lethargic or tired.
2. Medium. The subject's physical movements appear normal, neither very sluggish and slow nor very quick and vigorous. Includes quiet play.
3. High. The subject plays or works with much energy; actions are quick and/or vigorous. Includes running or playing sports where the child is continually moving.
4. Too active, frenetic activity. The subject plays or works with much energy but his physical movements appear uncontrolled. If the child's behaviour would lead one to characterize him as "hyped-up" or agitated (i.e., during that interval) this category would be used.

D. Emotional Expression

In each interval, the observer places an "x" in the appropriate box or boxes to indicate any emotional expressions which the child shows. The observer indicates which if any of the first five behaviours, represented by variables 1-5 and described below, were shown. More than one emotion may be coded in a single interval. If and only if none of the first five variables are coded, the observer codes variable number 6. Definitions are:

1. Happy, laughs, smiles. Child laughs or smiles. This category is used also if the child is singing to him/herself.

add

2. Shows anxiety. Child appears to be anxious or nervous. This category is used either if the child's facial expression indicates anxiety or nervousness or if he/her physical movements (e.g., nail-biting, repeated tapping) indicate nervousness.
3. Angry, hostile, irritable. Child expresses anger, annoyance or impatience, either verbally or behaviorally (including facially). This category should be used if the child appears to be acting as though he is in a "bad mood".
4. Sad. The child has a sad facial expression, cries or looks tearful.
5. Loses control, cries. The child cries uncontrollably or expresses rage (yells, throws a temper tantrum).
6. "Neutral." This category is marked for any 30-second interval in which none of the other codable behaviours (variables 1-5) are marked.

45

PLAYGROUND OBSERVATION

Child's Name _____

Enumerator _____

MINUTES

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| 1. Interaction with other children | | | | | | | | | | | | |
| 1. Initiates Interaction | | | | | | | | | | | | |
| 2. Positive response to bid | | | | | | | | | | | | |
| 3. Negative response to bid | | | | | | | | | | | | |
| 4. Seeks help | | | | | | | | | | | | |
| 5. Caretaking behavior | | | | | | | | | | | | |
| 6. Aggression | | | | | | | | | | | | |
| 7. Involved in Interaction | | | | | | | | | | | | |
| 8. Solitary behavior | | | | | | | | | | | | |
| 9. No behavior recorded | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| 2. Behavior with adults | | | | | | | | | | | | |
| 1. Seeks attention | | | | | | | | | | | | |
| 2. Seeks physical contact | | | | | | | | | | | | |
| 3. Doesn't seek adult | | | | | | | | | | | | |
| 4. No adult | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| 3. Level of Activity | | | | | | | | | | | | |
| 1. Very low | | | | | | | | | | | | |
| 2. Medium | | | | | | | | | | | | |
| 3. High | | | | | | | | | | | | |
| 4. "Too" active, frenetic activity | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|-------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| 4. Emotion | | | | | | | | | | | | |
| 1. Very happy, laughs, smiles | | | | | | | | | | | | |
| 2. Shows anxiety | | | | | | | | | | | | |
| 3. Angry, hostile, irritable | | | | | | | | | | | | |
| 4. Sad | | | | | | | | | | | | |
| 5. Loses control, cries | | | | | | | | | | | | |
| 6. "Neutral" | | | | | | | | | | | | |