

# Precision Teaching and Alzheimer's<sup>1</sup>

Carolyn Talbert-Johnson and John O. Cooper

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Behavioral gerontology is the study of biological states and environmental conditions affecting behavior of elderly persons (Burgio & Burgio, 1986). It is a developing area of the applied science of behavior. Behavioral gerontologists study several classes of problem behaviors - for example, *incontinence* (Burgio, Engel, McCormick, Hawkins, & Scheve, 1988, Grosicki, 1968; Mitteness, 1987); *self-injury* (Mishara, Robertson, & Kastenbaum, 1973); *recreational skills* (Pierce, 1975); *eating, dressing, elimination, and walking* (Kanfer & Karoly, 1982; Burgio, Whitehead, & Engel, 1985); and *communication skills* (Bourgeois, 1990). Moreover, behavioral gerontologists have analyzed the effects of several interventions to improve the general functioning of the elderly and persons with Alzheimer's disease; including: the *design of living environments* (Bayne, 1971; Hussian, 1981; Kastenbaum, 1968); *foster grandparent programs* (Fabry & Reid, 1978); *home based family treatment* (Pinkston, Linsk, & Young 1988); *self-management* (Kanfer & Karoly, 1982; Burgio, Whitehead, & Engel, 1985); *caregiver training* (Linsk, Pinkston, & Green, 1982); and *performance management* (Burgio & Burgio, 1986). Most systematic treatment of the elderly is in psychiatric hospitals or long-term nursing facilities.

Authoritative opinions of behavioral deficits and excesses are common in the gerontology literature, but data on specific incidence of behavior problems is sparse. Zimmer, Watson, and Treat (1984) surveyed 42 nursing homes and found significant behavior problems among 64% of the 3,456 residents. Ninety-five percent of persons 65 or older live in private housing, either alone or with relatives. Ten to 20% of the elderly living in private housing have significant behavior problems such as memory deficit, disorientation, or decline in intellectual performance (Current Population Reports, 1984).

Ten percent of persons over 65 years of age and nearly 50% over 85 may have Alzheimer's disease. The National Institute on Aging (Gelman, Hager, & Quade, 1989) estimates 4 million elderly with Alzheimer's nationwide. With the number of persons over 65 years of age multiplying each year and the expected quadrupling of people over 85, the National Institute on Aging projects 14 million persons with Alzheimer's by the year 2050. Alzheimer's disease is a major issue in public-health.

Alzheimer's disease, a progressive illness involving the deterioration of brain cells, ultimately leads to severe intellectual and physical impairment and finally death. The cause is unknown. The length of illness afflicted before death is usually 7 to 10 years. The afflicted experience memory loss, confusion, and a decrease in using simple thought processes during the early stage of Alzheimer's disease. They have difficulty making decisions and using daily living skills and language during the middle stage. They require maximum supervision and total care (e.g., must be bathed, dressed, groomed) during the last stage. Eventually these persons become incontinent. Death usually results from infections or pneumonia because of being in bed for long periods of time.

Commonly held assumptions concerning (a) the degenerative nature of Alzheimer's disease, (b) the limited ability of patients to learn new information, and (c) the gradual decreases in patient self-management have discouraged systematic behavioral interventions for persons with Alzheimer's (Bourgeois, 1990). Yet the uses of behavioral interventions with the elderly suggest application for persons with Alzheimer's. For example, Burgio and Burgio (1986) and

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Carstensen (1987) found measurably effective positive environmental treatments for behavioral deficits and excesses during their reviews of applied research with elderly dementia patients.

Persons with Alzheimer's disease progressively experience difficulties in making appropriate decisions and judgments regarding their own personal physical care. Persons with Alzheimer's disease will not maintain self-help behaviors over an extended time. These practical concerns may cause some service providers to avoid or abandon the area of behavioral gerontology. A modified perspective on treatment procedures and treatment goals is necessary for persons working with Alzheimer's disease. For example, improved functioning will likely worsen as the disease progresses. It is, however, possible and important to provide these persons with sufficient skills for independent functioning for as long as possible.

Independence in dressing is a major concern by the middle stage of the disease. Dress is often inappropriate for the season, the time of day, or the occasion. Characteristically these persons forget how to dress, have difficulty with buttons, snaps and zippers, and "layer" clothes (e.g., putting on six pair of underpants). Often they do not change their clothing. We used least-to-most response prompts (Cooper, Heron & Heward, 1987) and picture cues (Park, Smith, Morrell, Puglisi, & Dudley, 1990; Wacker & Berg, 1983) to develop and maintain dressing skills of Alzheimer's participants in the middle stage of the disease.

## Method

### *Participants and Setting*

Three women with Alzheimer's disease served as participants. Florence, Mary B., and Mary P. were respectively 88, 74, and 66 years of age. Florence and Mary B. lived with their daughters, and Mary P. lived with her husband. Each (a) had the motor and physical dexterity to dress, (b) self-dressed, but did it infrequently or inappropriately, (c) read written instructions (e.g., Please put on the underclothes. Please put on the shirt.), (d) described the physical movements shown on a picture (e.g., photograph of the par-

ticipant putting on a shirt), and (e) identified themselves in a photograph. Each had a history of progressive intellectual decline without neurological or psychological illness.

Florence, the oldest of the three participants, regularly awoke two or three times during the night and often wandered around the apartment hiding objects. She exhibited extreme confusion, with severe short and long-term memory loss. Florence's medications included vasatec, micro-K, chlorthalidone vitarine, and feldene. These medications were prescribed because of high blood pressure, arthritis, and agitated behavior. Mary P. exhibited extreme disorientation and confusion. Related symptoms of the Alzheimer's disease produced vision difficulties. She took tegretol, for a thyroid condition and low sugar. Florence and Mary P. were rapidly entering the last stages of Alzheimer's disease. Mary B's. behavior was characterized by excessive memory loss, confusion, and non-adaptive daily routines (e.g., dressing, eating). She dressed independently; however, she changed clothing often during a day. Her clothing preference was slacks and blouses, but she *only* wore dresses to church. Mary B. did not take medication. The use of medication did not change for the three participants during the three months of the study.

Two observation sessions before the beginning of data collection verified the independent dressing skills of the participants. This condition was identical to response prompts and self-recording condition described below except for the absence of response prompts and self-recording. Also, caregivers provided assistance to the participants during the pre-observations, but not during training.

The setting was the participant's bedroom. Florence's bedroom was 15 ft. by 15 ft., contained a bed, a cabinet, and a dresser. The barren walls were white. Mary P.'s bedroom was 12 ft. by 12 ft., with a bed, a dresser, and a chair. Mary B's bedroom was 12 ft. by 15 ft. with a bed, a dresser, a television set, a stereo, a cabinet, and a night stand. Radios, stereos, and televisions were off during training to eliminate distractions.

### *Definition and Measurement of the Dependent Variable*

Dressing patterns of elderly persons provided the movements used for our task analyses of dressing. Caregivers gave comments on realistic physical expectations. Carolyn timed herself dressing to determine the instructional aims for the task analyses. The five task analyses identified including the instructional aims were: (a) *Underwear* (e.g., brassiere, undershirt, slip), 32 steps with an instructional aim of 45 movements

per minute; (b) *Top layer* (e.g., shirt, blouse, sweater), 17 steps with an instructional aim of 40 movements per minute; (c) *Bottom layer* (e.g., skirt, pants, slacks), 16 steps with an instructional aim of 40 movements per minute; (d) *Under layer for feet* (e.g., socks, stockings, knee highs), 14 steps with an instructional aim of 35 movements per minute; and (e) *Outer layer for feet* (e.g., slippers, shoes), 5 steps with an instructional aim of 10 movements per minute. An example from these task analyses is presented in

Table 1.

Table 1

#### One Example From The Five Task Analyses of Dressing

Step	Movement
1.	"Select" the written instructions (or picture cues).
2.	Sit on the bed.
3.	Pick up the brassiere.
4.	Hold onto the right end of the brassiere.
5.	Bring the right end to the front.
6.	Bend the left arm and grab the left end from the back.
7.	Bring the left end to the front.
8.	Pull the two ends together.
9.	Snap the hooks together.
10.	Move the brassiere to the correct position.
11.	Grab hold of the right strap.
12.	Put the right arm through the right strap.
13.	Grab hold of the left strap.
14.	Put the left arm through the left strap.
15.	Pick up the underpants.
16.	Bend over with the underpants in your hands.
17.	Lift right leg and put it into right hole of underpants.
18.	Put the right leg down.
19.	Lift left leg and put it into left hole of underpants.
20.	Put the left leg down.
21.	Bend over and pull the underpants up to the knees.
22.	Stand up.
23.	Pull the underpants up to the waist.
24.	Sit on the bed.
25.	Pick up the undershirt (or full slip).
26.	Hold up the undershirt (or full slip) over the head.
27.	Pull the undershirt (or full slip) down over the head.
28.	Look for the tag inside the undershirt (or full slip).
29.	Turn the tag to the back.
30.	Put the right arm through the right sleeve (or strap).
31.	Put the left arm through the left sleeve (or strap).
32.	Pull the undershirt (or slip) down over the stomach.

Independent performances of the steps within the task analyses were counted correct. All steps evoked by verbal or physical prompts were also correct. In addition, responses were correct if the participant completed a task in a functional manner, but the performance was less than perfect (e.g., has shirt on, but missed buttoning a button). Responses occurring out of sequence or not completed following a response prompt were counted incorrect.

### *Procedural Reliability*

A procedural outline for each condition of the study aided monitoring of the integrity of our training. The caregivers recorded the sequence of each step of task analyses and number of response prompts on the procedural outline. They observed the application of our training procedures twice weekly. No deviations from the procedural outline occurred during 10 sessions with response prompts and written directions and during 12 sessions with response prompts, written directions, and picture cue.

## **Procedures**

### *Response Prompts and Self-Recording*

Training began as the participant awoke during weekday mornings, between the hours of 6:00 a.m. and 9:00 a.m. Least-to-most response prompts and self-recording assisted all steps of task analyses. The response prompts included verbal instruction, gesture, and verbal instruction with graduated physical guidance. A verbal prompt told the participant what to do. The gesture prompt pointed to a piece of clothing. During the verbal and graduated physical guidance prompt, Carolyn told the participant what to do and gave physical assistance as needed. If one level of prompt failed to produce the correct response within 10 seconds, the next level of prompt occurred. Carolyn waited 10 seconds after the initial statement, "*Name*, it is time to get dressed." She did not intervene as long as the participant responded independently to the steps in the task analyses within 10 seconds. A verbal response prompt (e.g., *Name*, pick up the shirt.) occurred when the participant failed to respond within 10 seconds of the initial statement or after the previous task. The gesture response prompt was the second level of prompt. For example, Carolyn pointed to the specific piece of clothing. The combined use of a verbal prompt and physi-

cal guidance formed the third level of prompt. She said, "*Name*, let's do it this way," and physically helped the participant complete the task.

After completing task analysis #1, the assessment on task analysis #2 immediately continued. Carolyn told the participant to continue dressing only if a response to the next task analysis did not occur. This prompt procedure applied to each task analysis.

The bedroom closet door contained a card for self-recording. The card listed the five task analyses and the items of clothing used for each task. For example, the card for *underwear* included the written names of brassiere, underpants, undershirt, slip, and panty hose. The categories "yes" and "no" were next to each item of clothing. The participant, with assistance, checked "yes" for the clothing items she put on during training.

Correct responses were praised. If the participant was non-cooperative or refused to comply, Carolyn discussed the behavior problem with the participant in a quiet and gentle voice. The caregiver helped if discussion failed. One time Carolyn ended a training session because of continuous noncompliance by Mary B.

### *Response Prompts, Self-Recording, and Picture Cues*

This condition used response prompts, self-recording and picture cues. Picture cues were photographs of the participant in various stages of dress that illustrated the specific task analysis. For example the photograph for task analysis #1 showed the participant in her underclothes. Five separate photographs illustrated each of the task analyses. The photographs were introduced sequentially during training. For example, the first photograph was attached to the bedroom closet door during picture cue training for task analysis #1, photographs one and two during picture cue training for task analysis #2, and so on. The 8 1/2 in. x 11 in. pictures were laminated. The photograph size was 5 in. x 7 in. Also, the picture cue included a written instruction (e.g., Put on the underwear.). The participant looked at the photograph when she did not complete a step following the least-to-most response prompts. The participant self-recorded (i.e., marked a

checklist) whether she (a) looked at the photographs, (b) looked at the appropriate photograph in sequence, or (c) started and completed dressing as shown in the photographs within the criterion time limit. A card for self-recording was placed after the last picture illustrating task analysis #5. Finally, the participant received verbal instructional feedback while looking at the photographs (e.g., "*Name*, please look at the picture. You have your shoes on the wrong feet.").

### *Programming for Maintenance*

To program for maintenance, the caregivers received instruction on the use of least-to-most response prompts, self-recording, and picture cues. The procedures for the caregivers were identical to those used by Carolyn during training. For two participants, we checked for maintenance once weekly for three weeks after the completion of training; for Florence the three checks spanned two weeks.

## Results

Data obtained from each of the three participants during response prompts and self-recording and picture cue conditions are presented in Figures 1 through 13.

### *Instructional Aims*

All participants improved their fluency of self-dressing during response prompts and self-recording or during picture cues. Florence and Mary B. reached aim on most items of clothing used for training. Florence put on her underclothes, dresses, stockings, and shoes; Mary B. put on her shirts, slacks, socks, and shoes. Mary P. reached instructional aim with slacks, socks, and shoes. She came close to the instructional aim with her underclothes and shirt. The participants made improvements in self-dressing during training. These improvements maintained during our three weeks of follow-up assessments with the caregivers providing the response prompts and picture cues.

### *Celeration Courses*

*Florence.* Florence's celerations for corrects ranged from a  $\div 1.3$  to a  $\times 1.5$ . Her celeration courses during the least-to-most response prompt condition ranged from a  $\times 1.0$  to a  $\div 1.3$ . The

celerations ranged from a  $\times 1.25$  to  $1.5$  with picture cues and the response prompts. Florence had no learning opportunities during training.

*Mary B.* Mary B's celerations for corrects ranged from a  $\div 1.1$  to a  $\times 1.7$ . Her most recent celeration (i.e., 3 to 4 weeks) for corrects  $\times 1.0$  or  $1.1$  except for putting on socks that  $\times 1.2$ . No learning opportunities occurred during training.

*Mary P.* Mary P.'s overall celerations for corrects ranged from a  $\times 1.25$  to  $1.6$ . Her most recent celeration (i.e., 3 to 4 weeks) for correct steps  $\times 1.0$  except for the shirt that multiplied by  $1.25$ . Celerations of learning opportunities remained low and flat throughout training with only a few exceptions. Mary P.'s learning opportunities with underclothes  $\times 1.4$  before the use of picture cues. Her learning opportunities with underclothes during the picture cue condition  $\div 1.3$ . Mary P.'s celerations for underclothes during the picture cue phase displayed a "Jaws" learning picture.

### *Jumps and Turns*

Florence's frequencies of putting on her shoes  $\times 1.0$  during the first 4 weeks of training followed by a jump up of  $\times 1.8$  then a celeration  $\times 1.25$ . Her frequencies of putting on her dress  $\div 1.3$  followed by a jump up of  $\times 2.8$  and a celeration  $\times 1.3$  when picture cues were introduced. Florence's frequencies of putting on her underclothes were  $\div 1.1$  with an immediate turn up celeration course  $\times 1.25$  during the picture cue condition.

Mary B.'s frequencies of putting on her socks  $\div 1.1$  before the picture cue phase. Her frequencies jumped up by a  $\times 2$  with the picture cues.

## Discussion

We assessed the effects of least-to-most response prompts and picture cues on the self-dressing of persons in the middle stages of Alzheimer's disease. All participants made improvements in self-dressing and reached most instructional aims in a relatively short time. Occasionally, their frequencies of self-dressing exceeded our fluency aims.

We anticipated picture cues to be effective with our participants. There is a growing body of re-

search on the use of picture cues to develop and maintain behaviors of older adults. For instance, Bourgeois (1990) found that the conversational skills of Alzheimer's participants improved with the use of picture cues. Hanley and Lusty (1984) taught patients with dementia to maintain orientation skills using memory aids. Picture cues have been more effective in occasioning memory with older individuals than verbal instructions.

Mary B.'s mental and physical capabilities were stable during our training. She maintained several independent skills. Florence and Mary P., however, were rapidly progressing to the final stage of Alzheimer's disease. There was a noticeable difference in Florence's and Mary P.'s ability to walk. Their gait became increasingly unsteady. They were easily agitated. Their sleeping patterns were dramatically changing. They were becoming less and less sensitive to their environments. With this background information on the mental and physical functioning of our participants and the growing interest in the use of picture cues with Alzheimer's patients, the high number of dressing skills that reached or approached the instructional aims with only the simple, unobtrusive least-to-most response prompts was a surprise. The picture cues were important only for Florence. We found no other research specifically using least-to-most response prompts to develop or maintain self-help skills with Alzheimer's patients or the elderly.

The caregivers used a 10-item check list to assess the meal time behaviors of the participants. They daily rated eating skills during breakfast or during the dinner meal. This "untreated baseline condition" indicated the general stability of self-help skills other than self-dressing. These evaluations showed that as Florence, Mary B., and Mary P. improved their dressing skills during our interventions, they regressed in other self-help skills. For example, they increasingly spilled food, confused the identification of food items, and experienced more episodes of incontinence. This finding is relevant because again it shows the independence of behaviors; meaning, dressing skills improved, but other self-help skills (e.g., self-help at mealtime) worsened.

All the caregivers responded positively toward our study. It was beneficial to them because the caregivers could (a) maintain a morning schedule

and attend to other tasks such as preparing breakfast, (b) receive a brief respite period, and (c) maintain a loving relationship with the person with Alzheimer's who was neatly and appropriately dressed and groomed for breakfast.

There is a need for continued research on response prompting techniques to develop self-help skills with persons who have Alzheimer's. Another possible area for future research is self-dressing during the evening hours. It would be interesting and helpful to study "sun downing." Sun downing describes some persons with Alzheimer's and some elderly who increase in agitation during the late afternoon and evening hours. Still two other possibilities included (a) discrimination training for the acquisition of clothing selection (e.g., different and appropriate clothing) and (b) procedures to maintain or develop often neglected grooming skills (e.g., brushing teeth, washing face, combing hair). Clothing selection is an essential instructional area for persons with Alzheimer's, disease since clothing selection is often a complicated and difficult task.

Families are the primary caregivers of persons with Alzheimer's. Roughly 70% of persons with Alzheimer's live with relatives. The caregivers in our study expressed need and concern for assistance in care giving. Even though the participants attended a day care facility, our caregivers lacked the skills, patience, and energy for such intense care giving. As a final suggestion, we need to investigate ways to help caregivers extend and maintain treatment gains.

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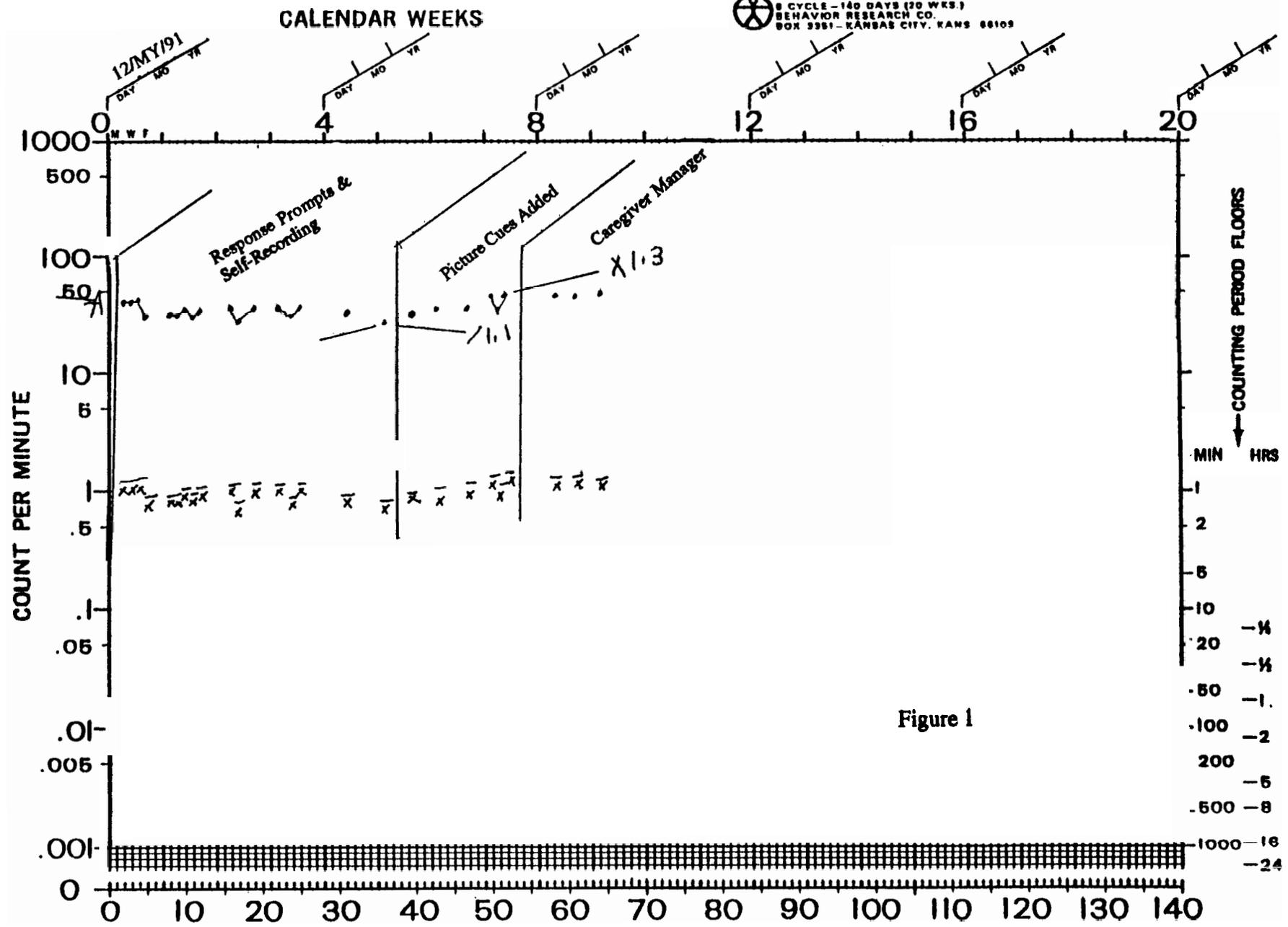


Figure 1

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Florence	88	Alzheimer	Under clothes
SUPERVISOR	ADVISER	MANAGER			BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University		T-Johnson	T-Johnson	T-Johnson/Cooper			Task Analysis
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			Steps



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CALENDAR WEEKS

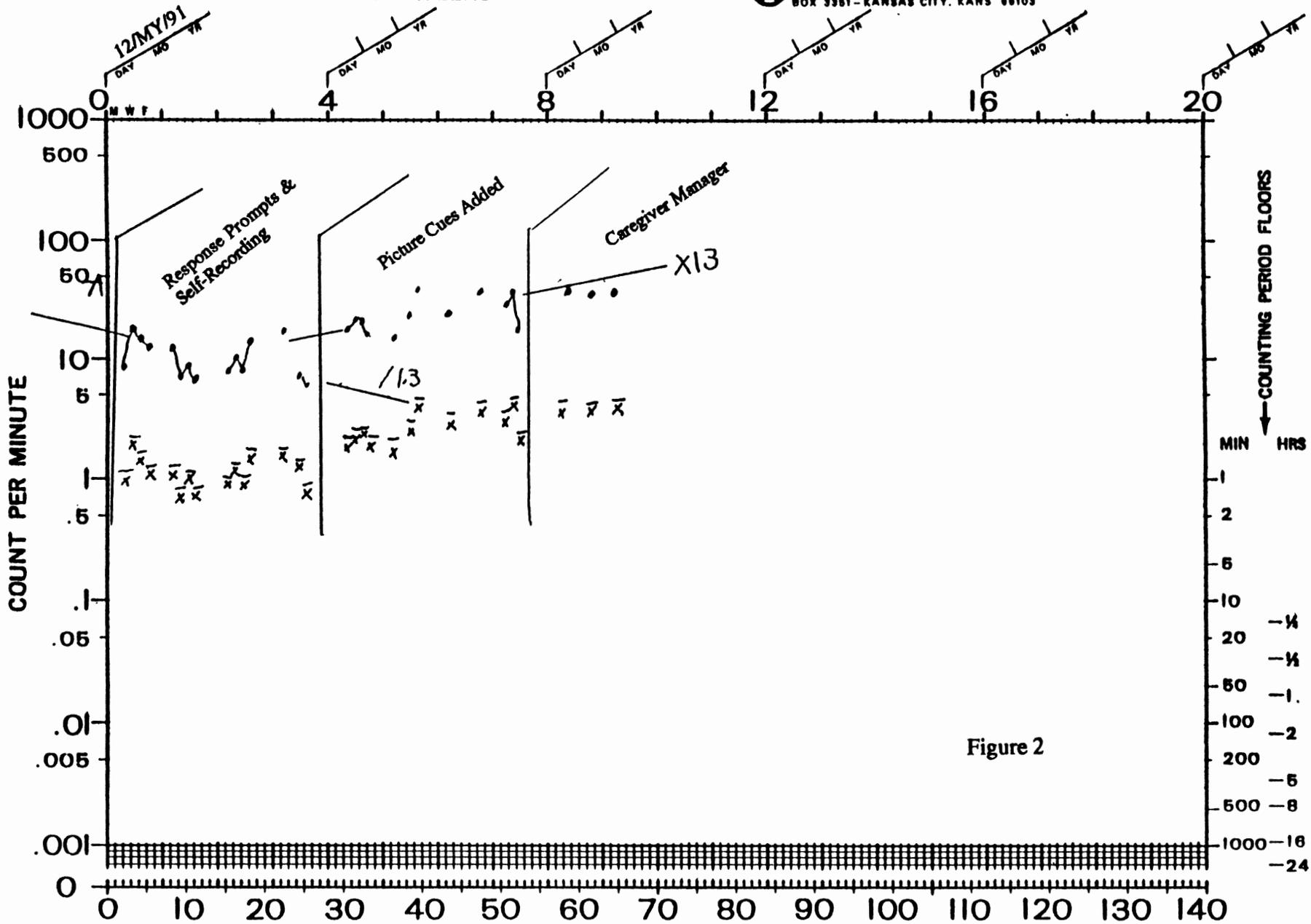


Figure 2

SUPERVISOR		ADVISER		MANAGER		TIMER		COUNTER		CHARTER	
Cooper	Cooper	Ohio State University	Ohio State University	T-Johnson	T-Johnson	T-Johnson	T-Johnson	Florence	88	Alzheimer	Dress
DEPOSITOR		AGENCY						BEHAVIOR	AGE	LABEL	COUNTED
								T-Johnson/Cooper			Task Analysis Steps



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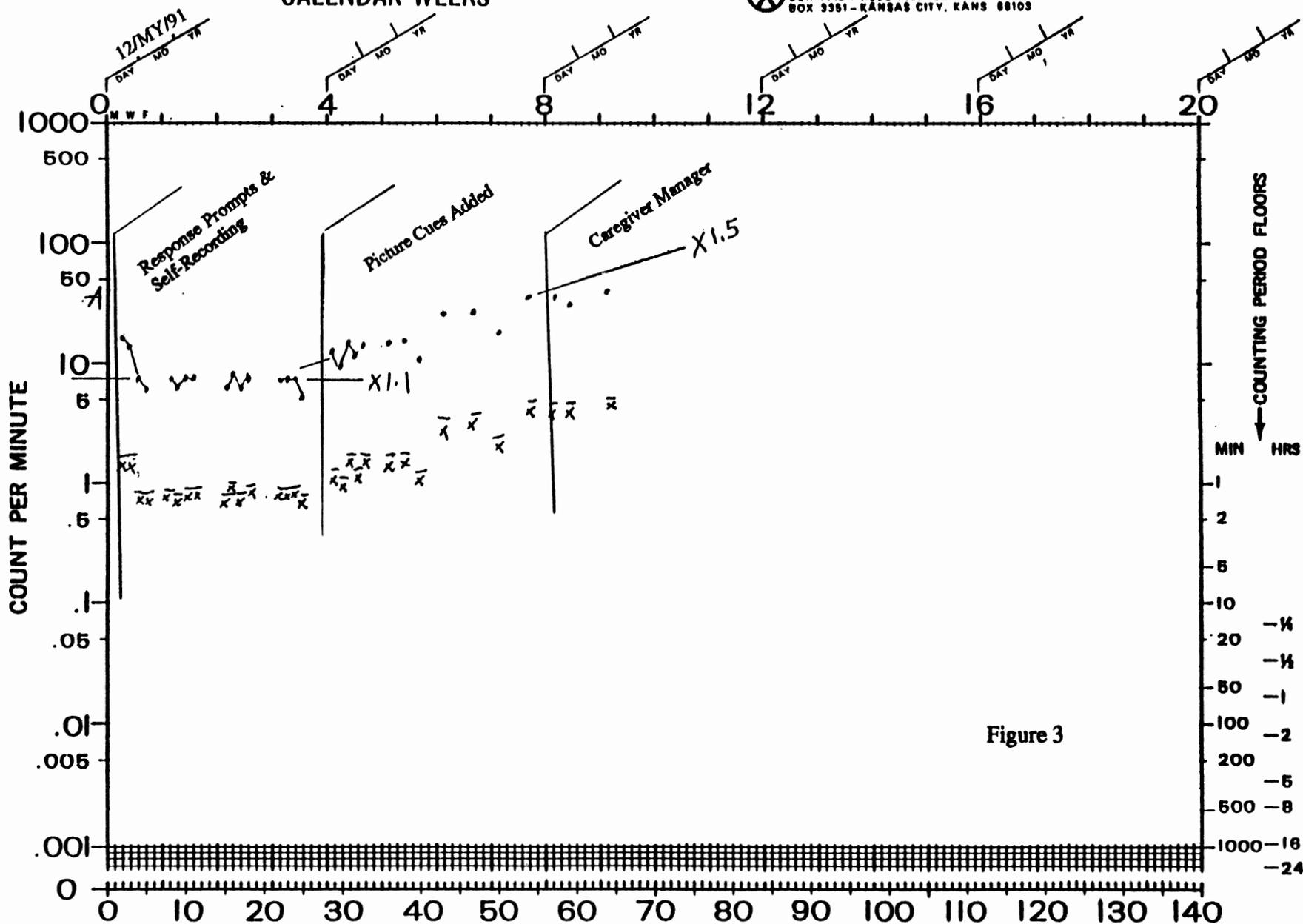


Figure 3

SUPERVISOR		SUCCESSIVE CALENDAR DAYS		FLORENCE		ALZHEIMER		STOCKINGS	
Cooper	T-Johnson	T-Johnson	T-Johnson	88	88	Alzheimer	Alzheimer	Counted	Stockings
Cooper	Ohio State University	T-Johnson	T-Johnson	T-Johnson/Cooper	AGE	LABEL	LABEL	Task Analysis	Counted
DEPOSITOR	AGENCY	TIMER	COUNTER	CHARTER				Steps	



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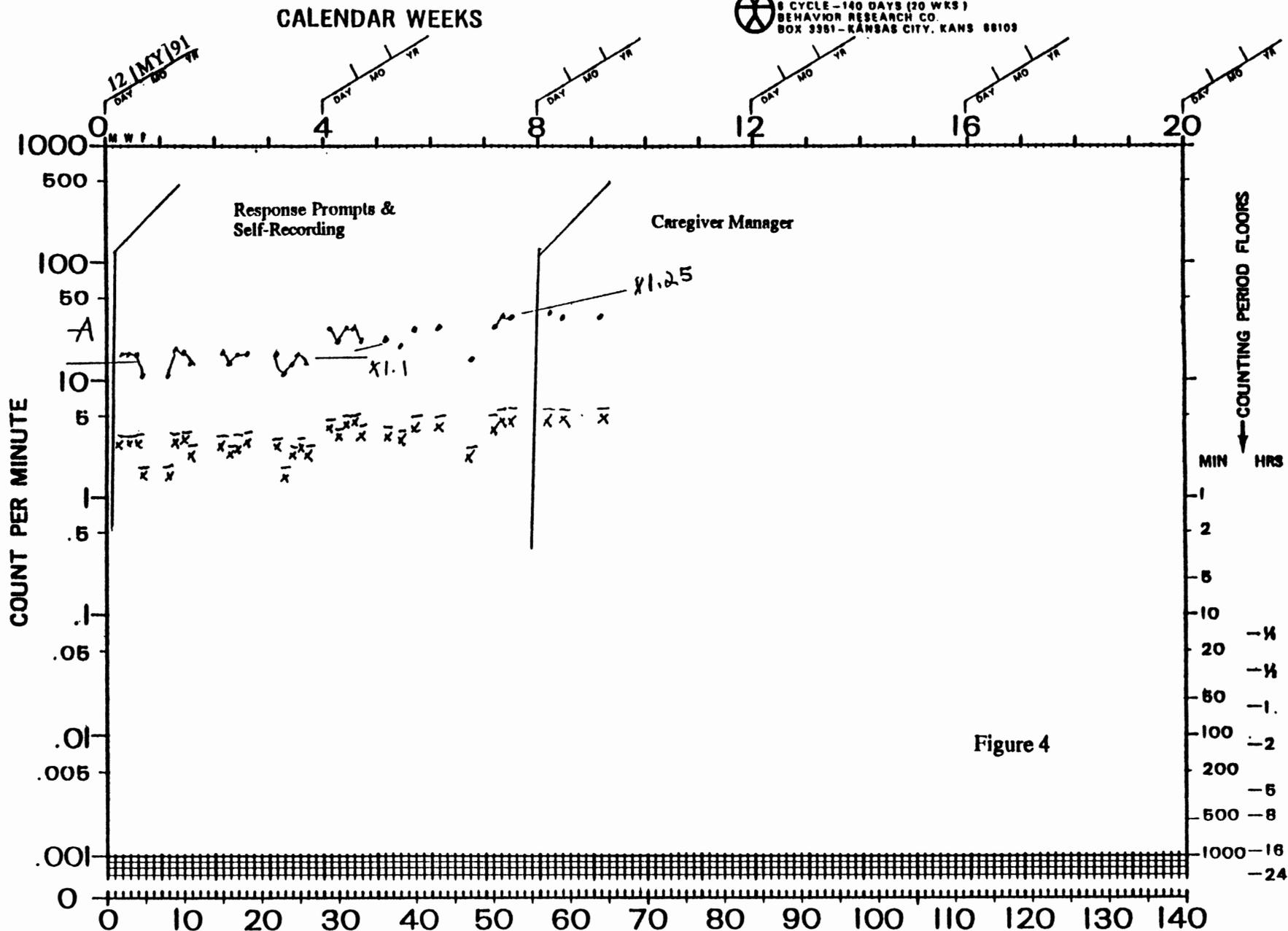


Figure 4

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Florence	88	Alzheimer	Shoes
SUPERVISOR	ADVISER	MANAGER	T-Johnson	T-Johnson	BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University		T-Johnson	T-Johnson	T-Johnson/Cooper			Task Analysis
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			Steps

CALENDAR WEEKS

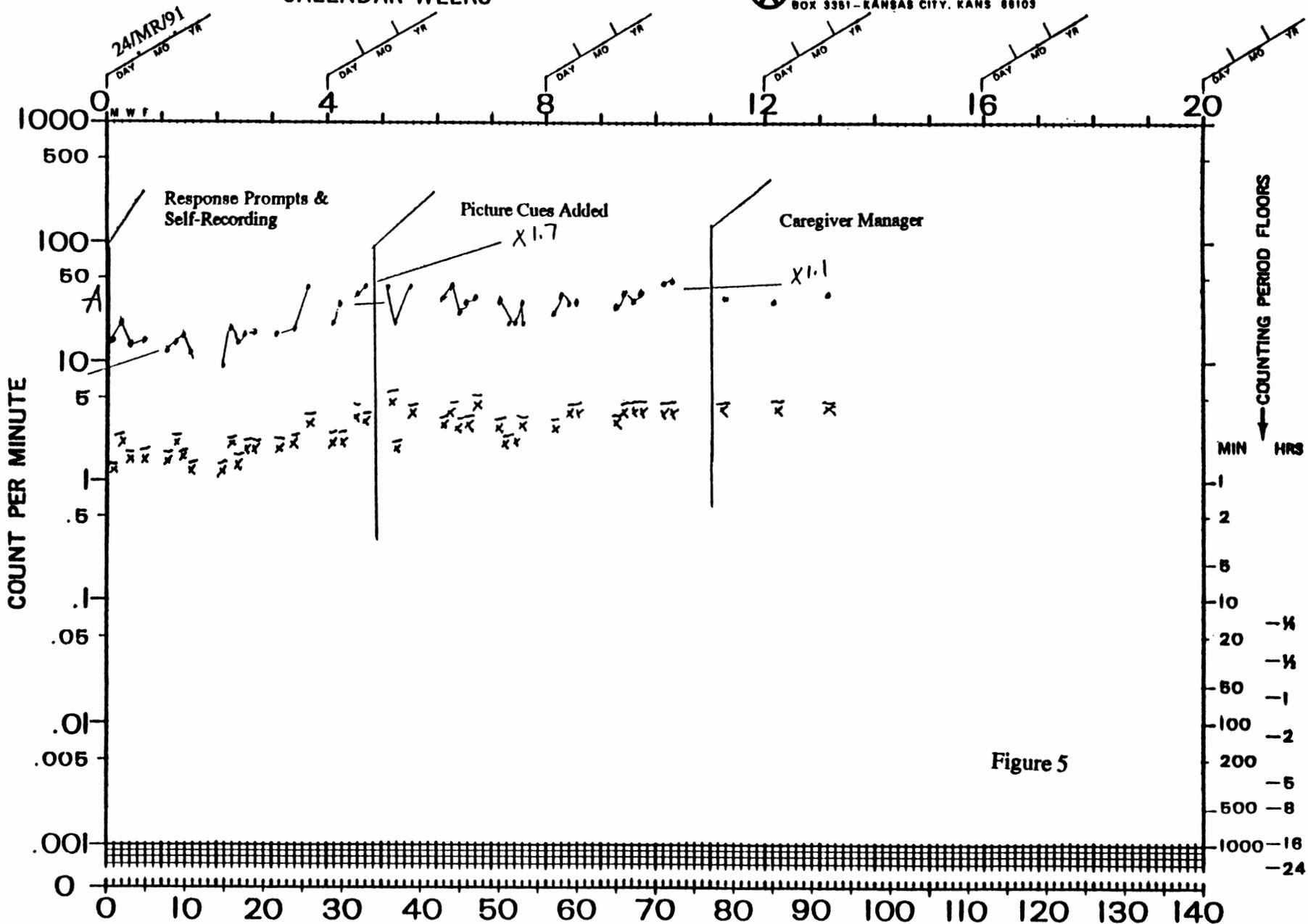


Figure 5

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Mary B.	74	Alzheimer	Shirt
SUPERVISOR	ADVISER	MANAGER	T-Johnson	T-Johnson	BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University				T-Johnson/Cooper			Task Analysis
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			Steps

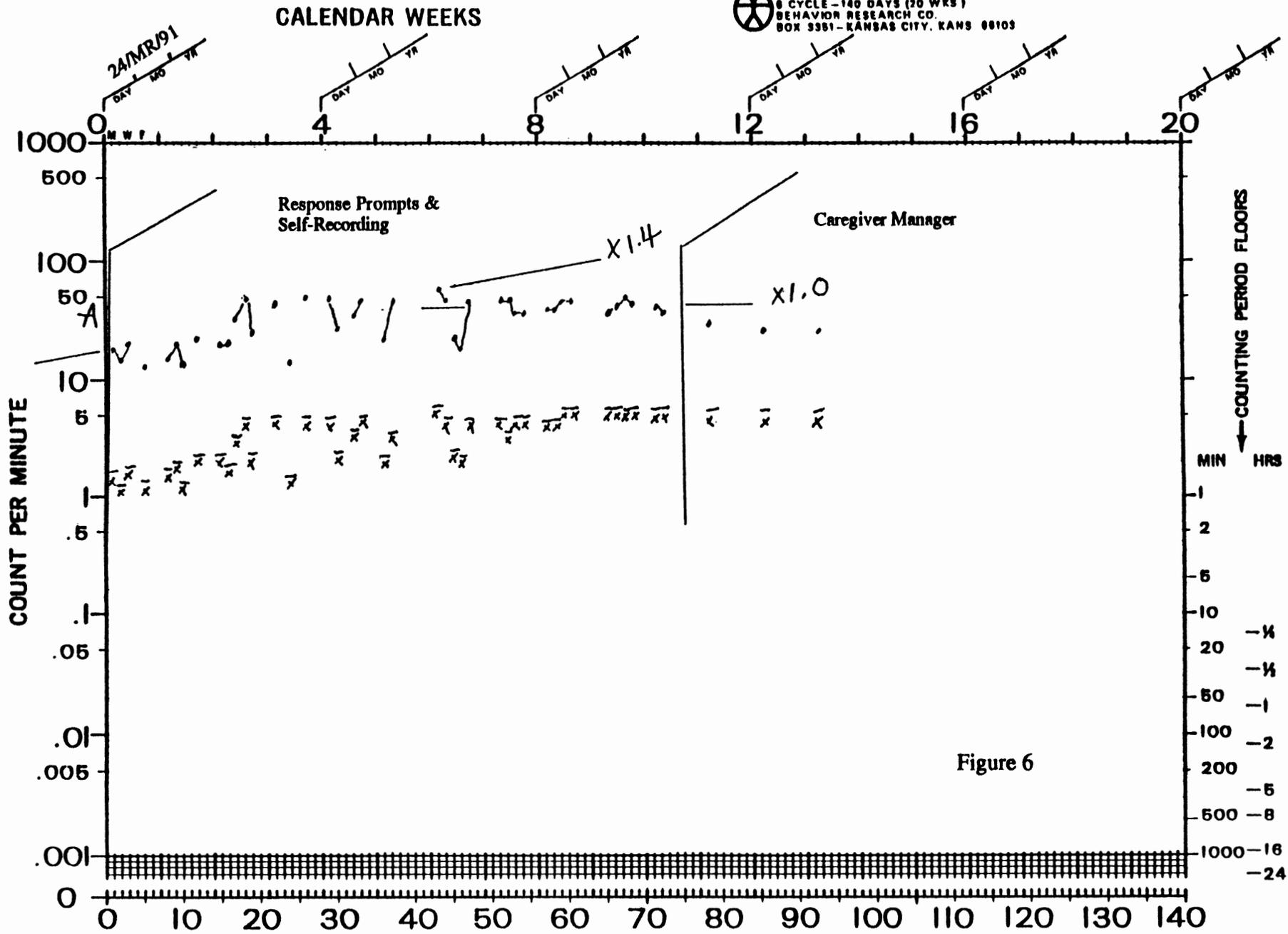


Figure 6

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Mary B.	74	Alzheimer	Slacks
SUPERVISOR	ADVISER	MANAGER			BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University		T-Johnson	T-Johnson	T-Johnson/Cooper			Task Analysis Steps
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			

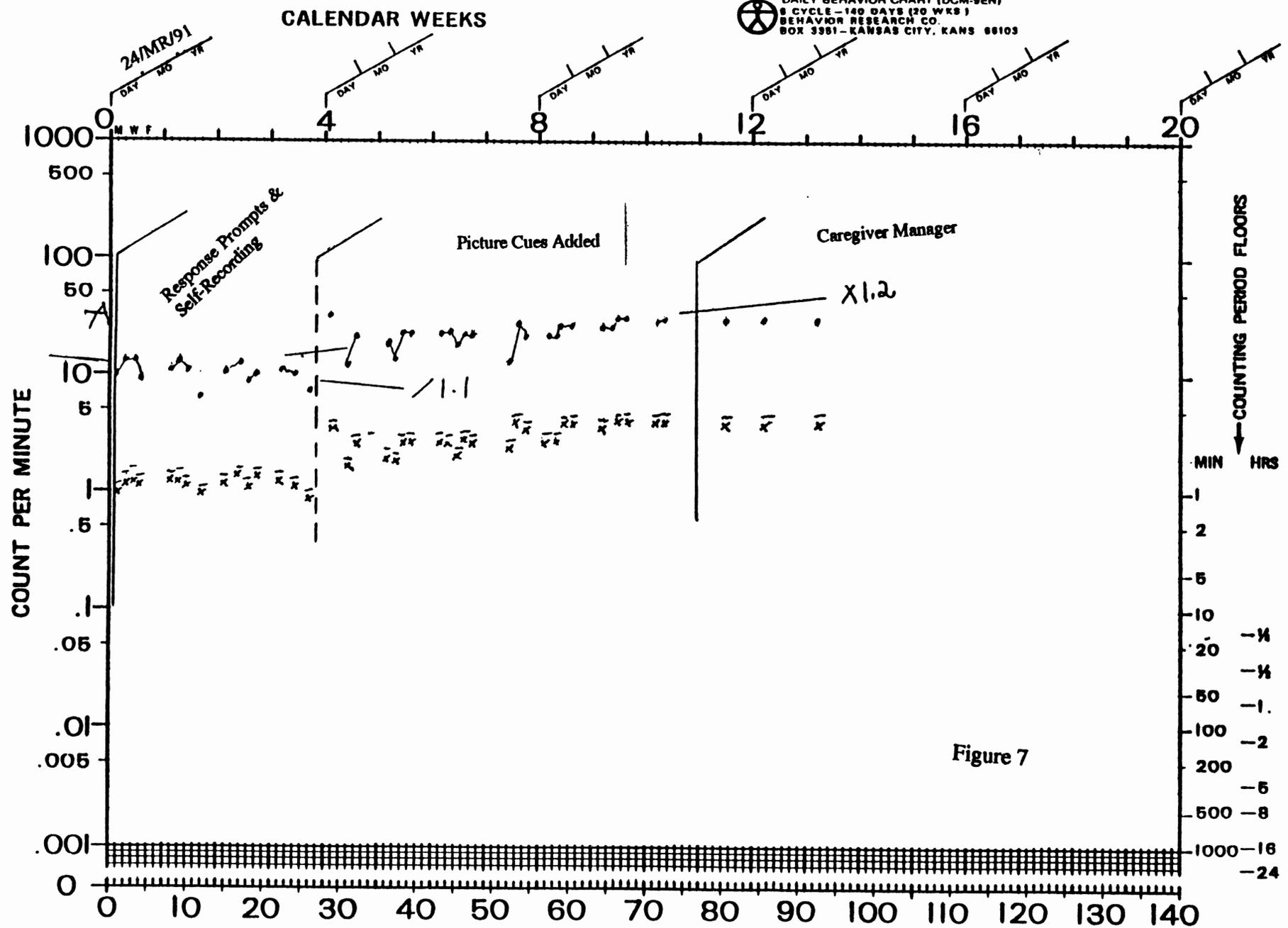


Figure 7

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Mary B.	74	Alzheimer	Socks
SUPERVISOR	ADVISER	MANAGER			BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University		T-Johnson	T-Johnson	T-Johnson/Cooper			Task Analysis
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			Steps



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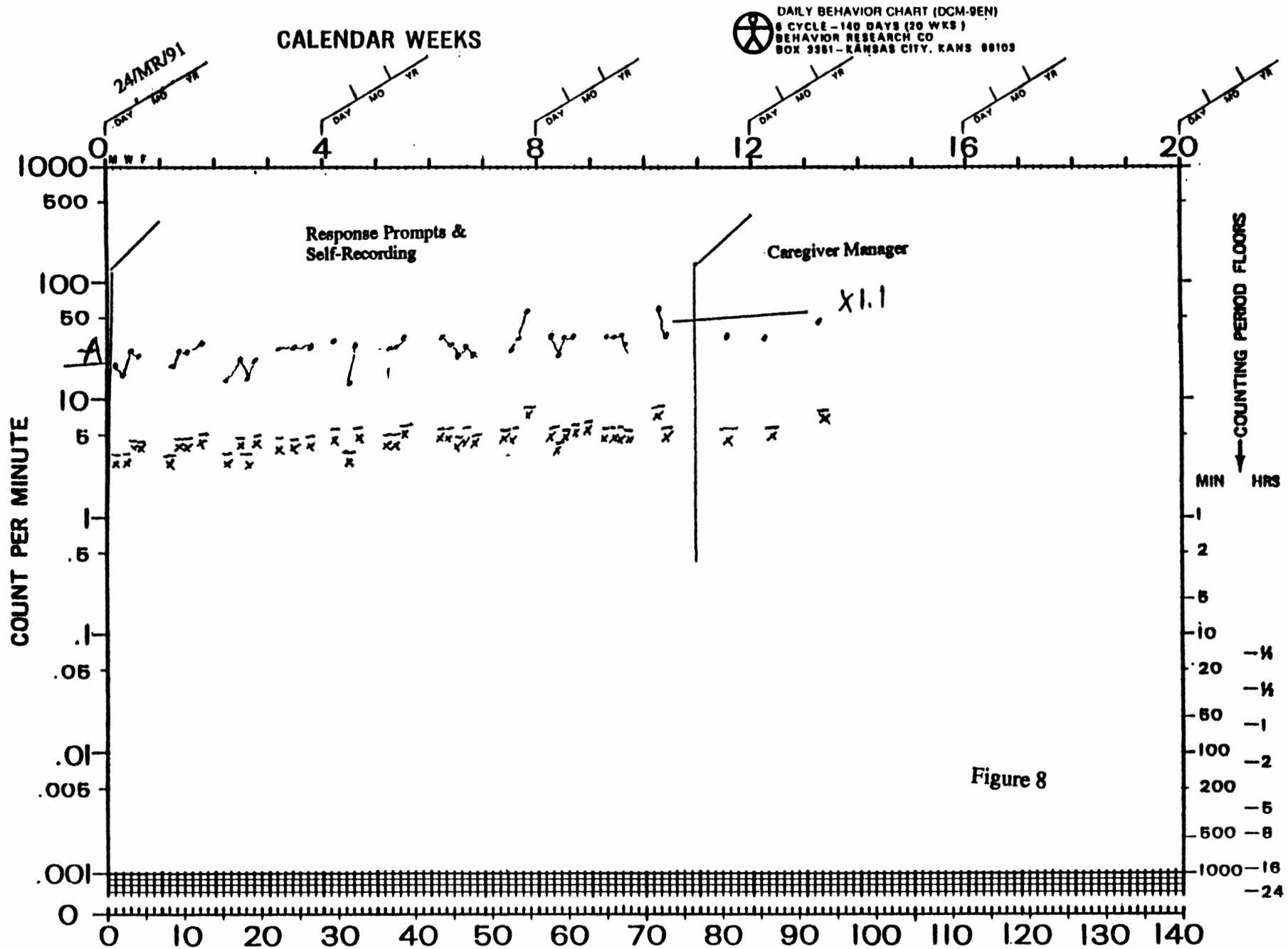


Figure 8

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Mary B.	74	Alzheimer	Shoes
SUPERVISOR	ADVISER	MANAGER			BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University		T-Johnson	T-Johnson	T-Johnson/Cooper			Task Analysis Steps
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			

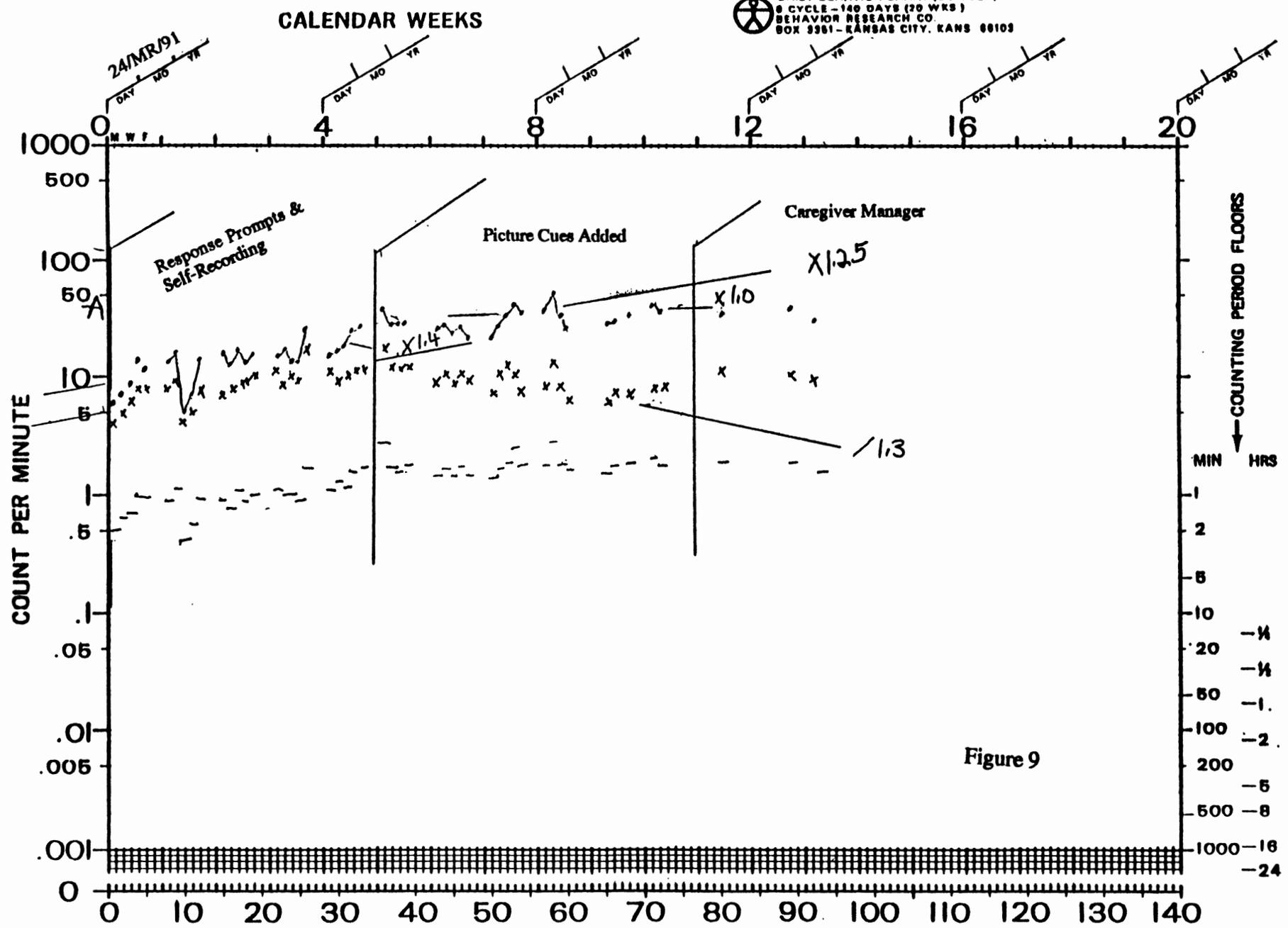


Figure 9

Cooper		T-Johnson		Mary P.		66	Alzheimer	Under clothes
SUPERVISOR	ADVISER	MANAGER	TIMER	COUNTER	BEHAVIOR	AGE	LABEL	COUNTED Task Analysis Steps
Cooper	Ohio State University		T-Johnson	T-Johnson	T-Johnson/Cooper			
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			

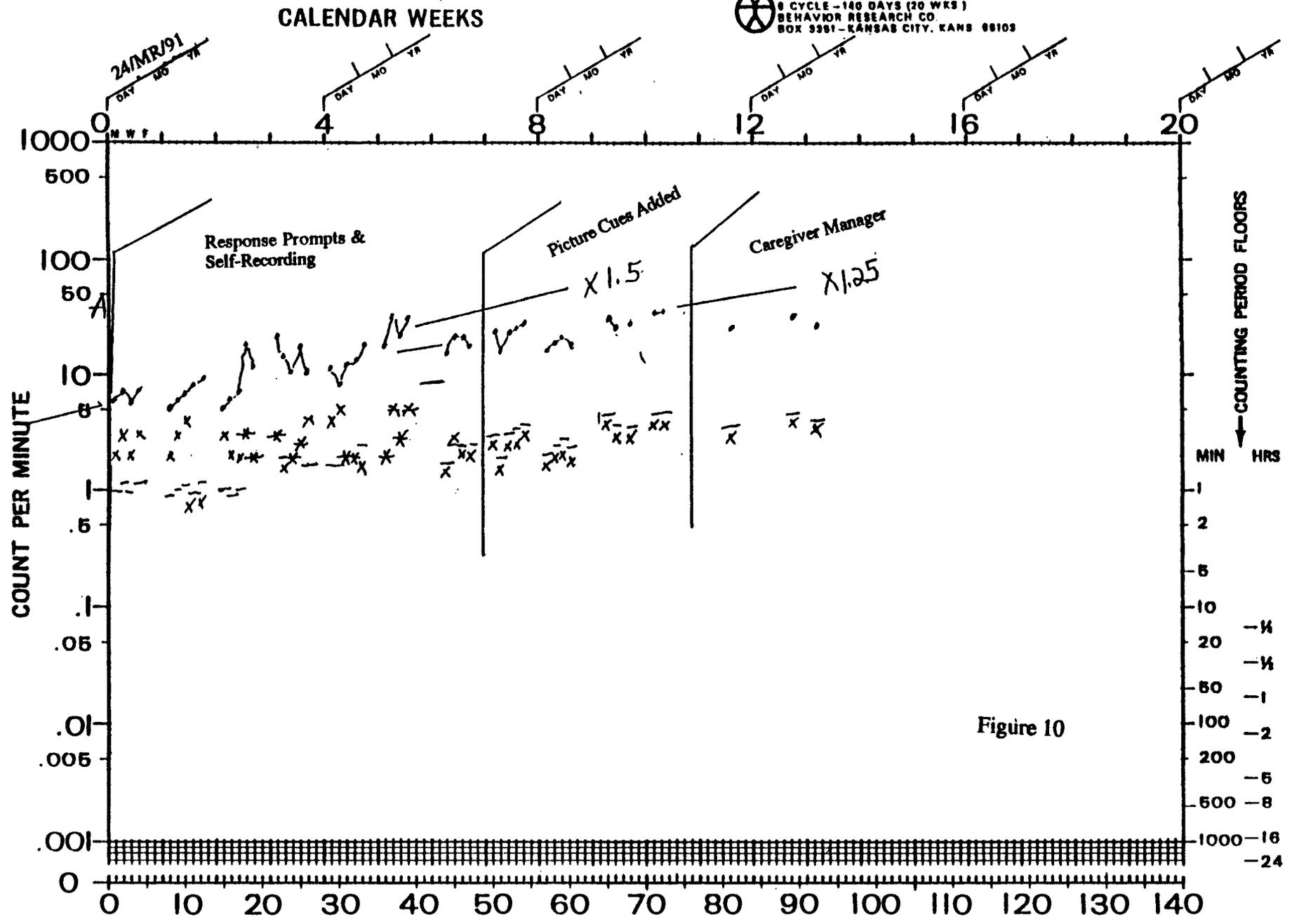


Figure 10

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Mary P.	66	Alzheimer	Shirt
SUPERVISOR	ADVISER	MANAGER	T-Johnson	T-Johnson	BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University				T-Johnson/Cooper			Task Analysis
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			Steps



DAILY BEHAVIOR CHART (DCM-BEN)  
 8 CYCLE - 140 DAYS (20 WKS)  
 BEHAVIOR RESEARCH CO.  
 BOX 3361 - KANSAS CITY, KANS 66103

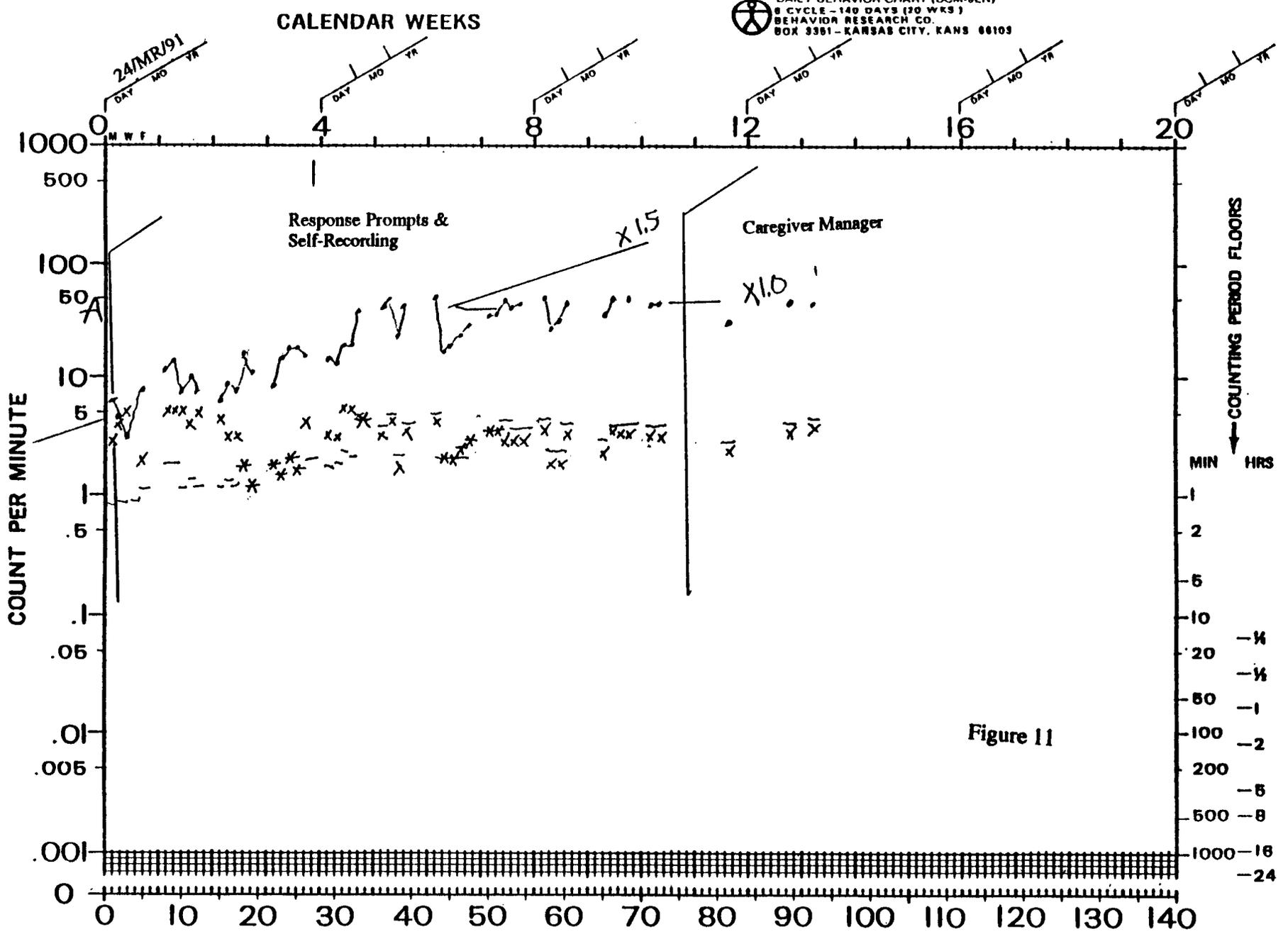


Figure 11

Cooper		T-Johnson		Mary P.		66		Alzheimer		Slacks	
SUPERVISOR	ADVISER	MANAGER		BEHAVIOR	AGE	LABEL	COUNTED				
Cooper	Ohio State University		T-Johnson	T-Johnson/Cooper			Task Analysis				
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER		Steps				

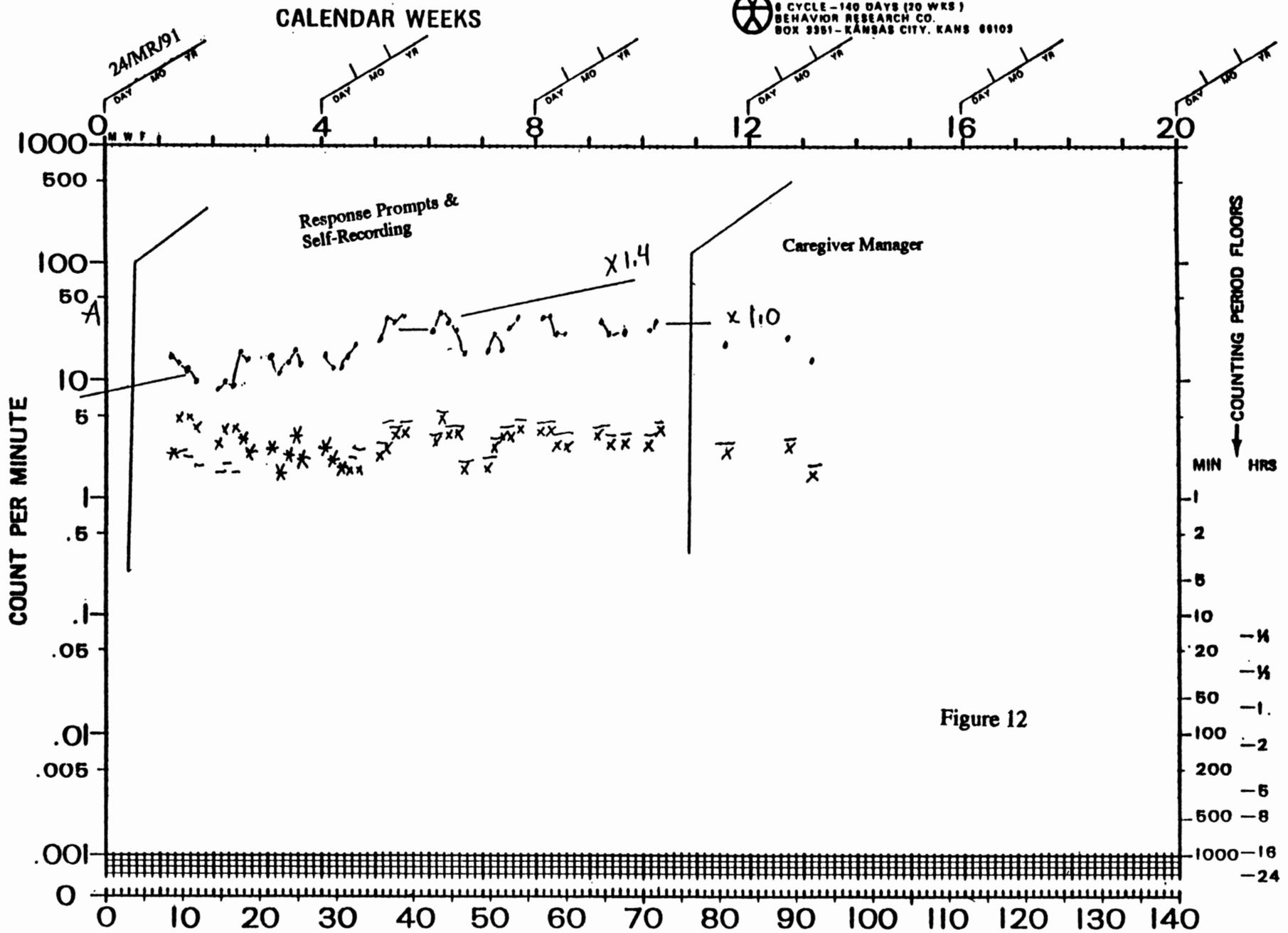


Figure 12

Cooper		T-Johnson		Mary P.		66	Alzheimer	Socks
SUPERVISOR	ADVISER	MANAGER	T-Johnson	T-Johnson	BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University				Johnson/Cooper			Task Analysis Steps
DEPOSITOR	AGENCY	TIMER	COUNTER	CHARTER				

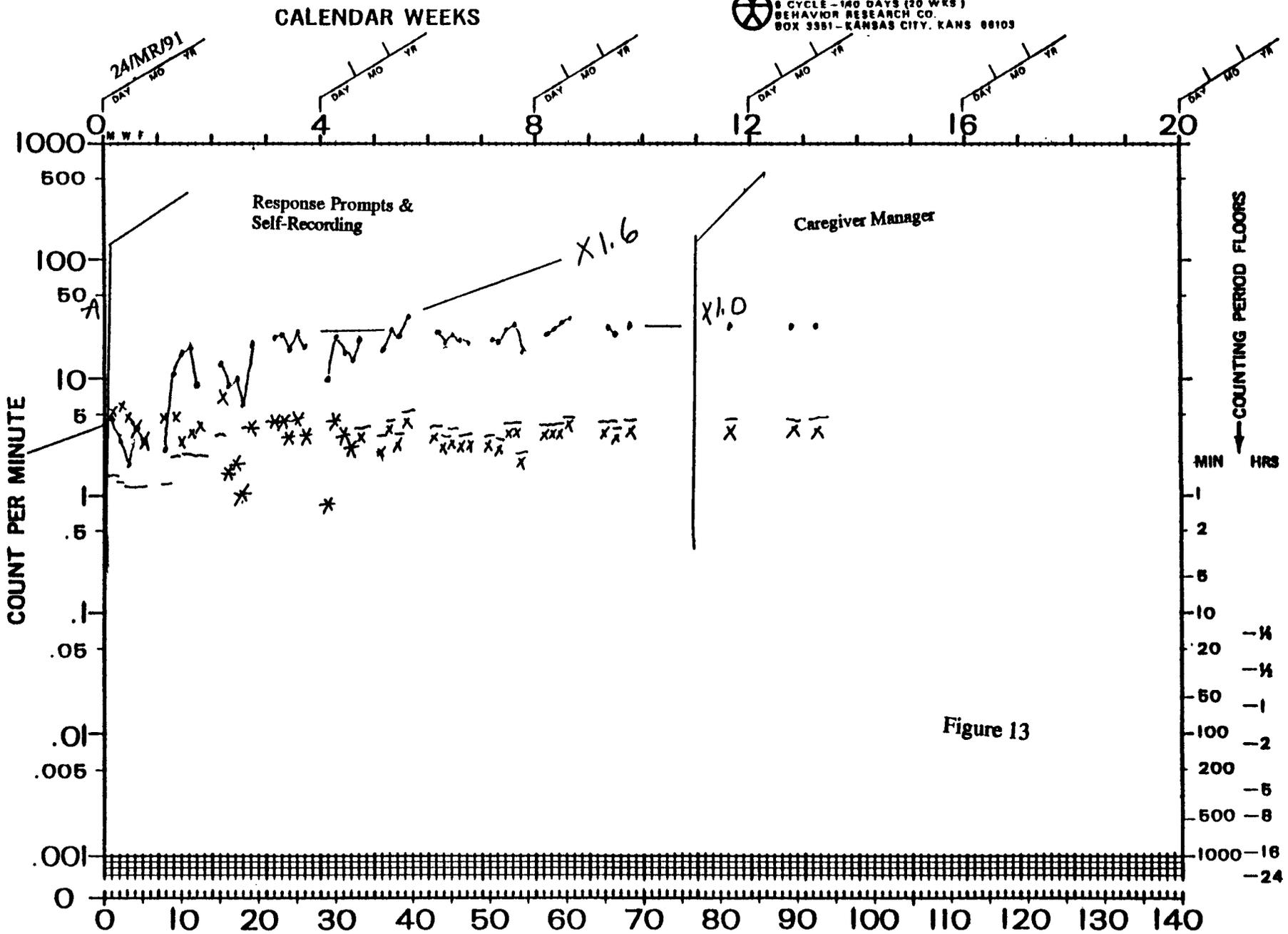


Figure 13

	Cooper	T-Johnson	SUCCESSIVE CALENDAR DAYS		Mary P.	66	Alzheimer	Shoes
SUPERVISOR	ADVISER	MANAGER	T-Johnson	T-Johnson	BEHAVIOR	AGE	LABEL	COUNTED
Cooper	Ohio State University				T-Johnson/Cooper			Task Analysis
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			Steps