

## PRECISION TEACHING: EXTENDING THE BOUNDARIES

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Although Precision Teaching was initially used primarily in academic settings, the range of possible behaviors to be measured by Precision Teaching is only limited by our imaginations. Others in the field have demonstrated its applicability outside the school walls or on skills other than basic skills. There have been applications in rehabilitation, in business and in political forecasting. In my Precision Teaching classes here at Western Washington University, I have found some very inventive students. As part of the course requirement, they are asked to take data to chart on a behavior that they would like to see change. Some selected personal behaviors, while others elected to change the behavior of others, pupils or friends. I have been sometimes amused, and usually impressed by their ingenious application of Precision Teaching procedures.

I have selected five projects to illustrate the wide range of behaviors that naive PT students have been daring or crazy enough to try to measure. The first three are self-monitoring projects. The first is a fairly typical self-change project. The student pinpointed an area in her teaching that she wanted to improve--her use of specific praise statements. The second illustrates a change in a more unusual behavior--the deceleration of loss of concentration during a meditation session. The third student identified a skill he wanted to learn--Russian cossack dancing--and used Precision Teaching to monitor his progression as a dancer.

**Increasing Specific Praise Statements.** Peggy was a junior in Special Education. She found that when she worked with students in her practicum assignments she tended to use repetitive praise statements, such as "good" or "OK". She wanted to become more specific in her praise in hopes that she would be more effective with her students. She elected to monitor this behavior for five minutes each day while she was working with one of her practicum students. After she collected three days of data on this behavior, she began to require herself to think of a new specific praise statement every time she said "good" or "OK" (a little positive practice). As Chart 1 indicates, she did not need to make another intervention. Her specific praise statements rose from a low of 0 to her

aim of at least 2 per minute and the number of "good" and "OK" remarks fell to 1 per minute. Her corrects accelerated x1.4 and her errors decelerated /1.5.

**Decreasing Loss of Concentration During Meditation.** Stephanie decided to take on a challenge while she was taking Precision Teaching. After listening to an inspirational lecture early in the quarter in which her instructor claimed that Precision Teaching could be used successfully to monitor a wide range of behavior, she decided to select the hardest behavior to change she could imagine. She also decided to select one that was well outside the typical educational domain.

Stephanie had been meditating for many years at the time of this project. Over the years she had been disturbed by the number of times she lost concentration during her meditative periods. Her goal for her self project was to reduce these "aware" times from the baseline rate of nearly 1 per minute to no more than 3 in the ten minute meditation period. In order to monitor the concentration losses, she simply made a tally mark with a pencil each time she became "aware" in her meditation.

At first the monitoring alone reduced the number of "aware" times to 6 in ten minutes. Two interventions were tried, however, before the final goal of 3 losses in ten minutes was achieved. Both the interventions were antecedent changes. During the first change period she read a short passage before beginning to meditate. She hoped that this inspirational reading would help her focus during meditation and keep her mind from wandering. As Chart 2 indicates, however, the opposite effect was seen. Her concentration losses actually increased.

The second intervention was simply to change the time of day of meditation from the afternoon to the morning hours. The change had the desired effect and concentration losses were reduced.

**Learning the Cossack Dance.** Ron was a senior in educational psychology when he enrolled in Precision Teaching. He decided to use self monitoring to help him gain fluency in the difficult squat kick that is required in the traditional Russian Cossack dance. He identified a correct movement as one full kick (extension of the leg forward) with the other leg in a full squat position. The movement was completed when both legs had returned to the full squat position. In the correct full squat position, the thigh is parallel to the floor. An aim of 10 successive kicks with no fails in one minute was set.

CALENDAR WEEKS



DAILY BEHAVIOR CHART (DCM-9EN)  
 6 CYCLE - 140 DAYS (20 WKS.)  
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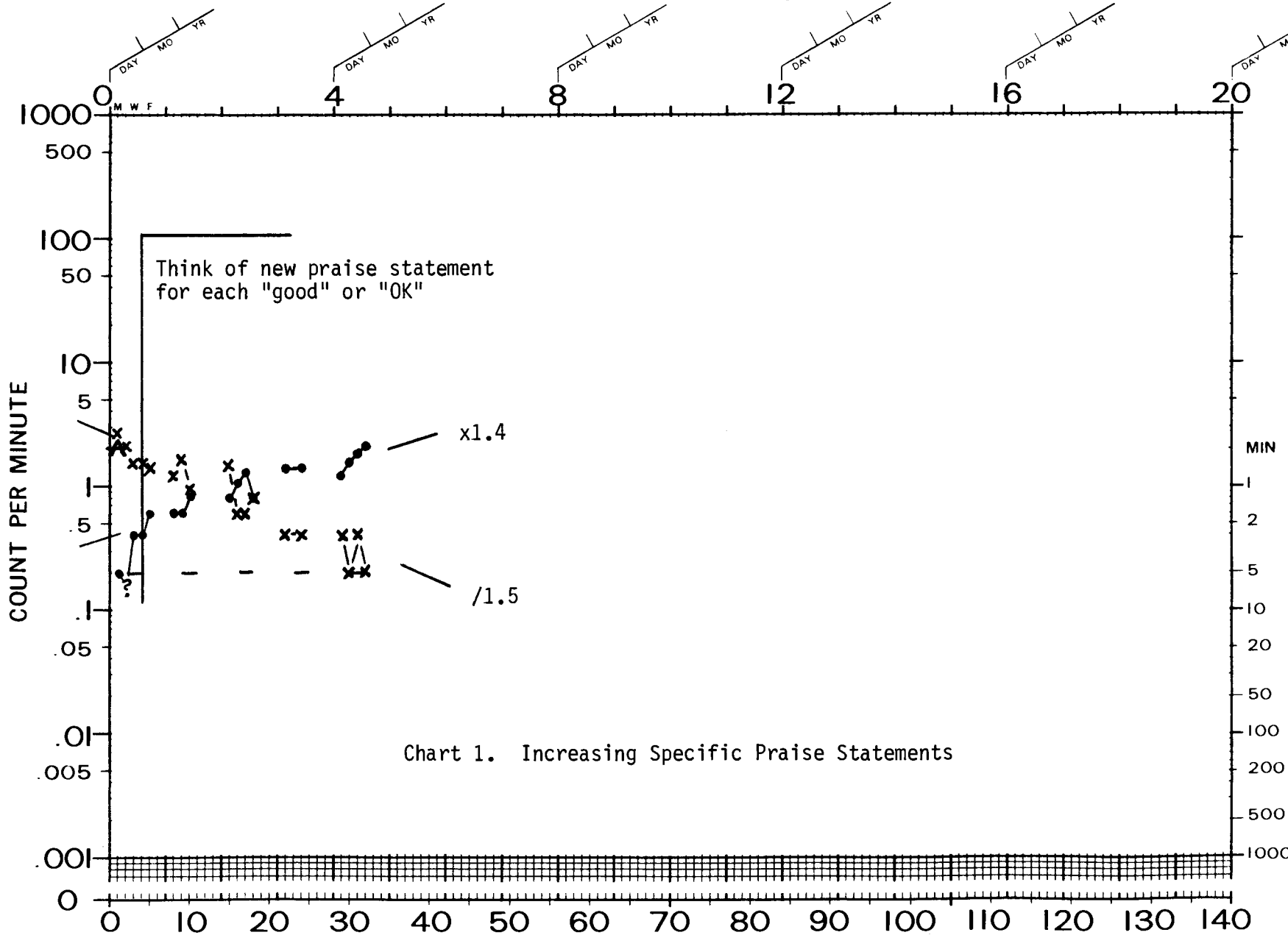


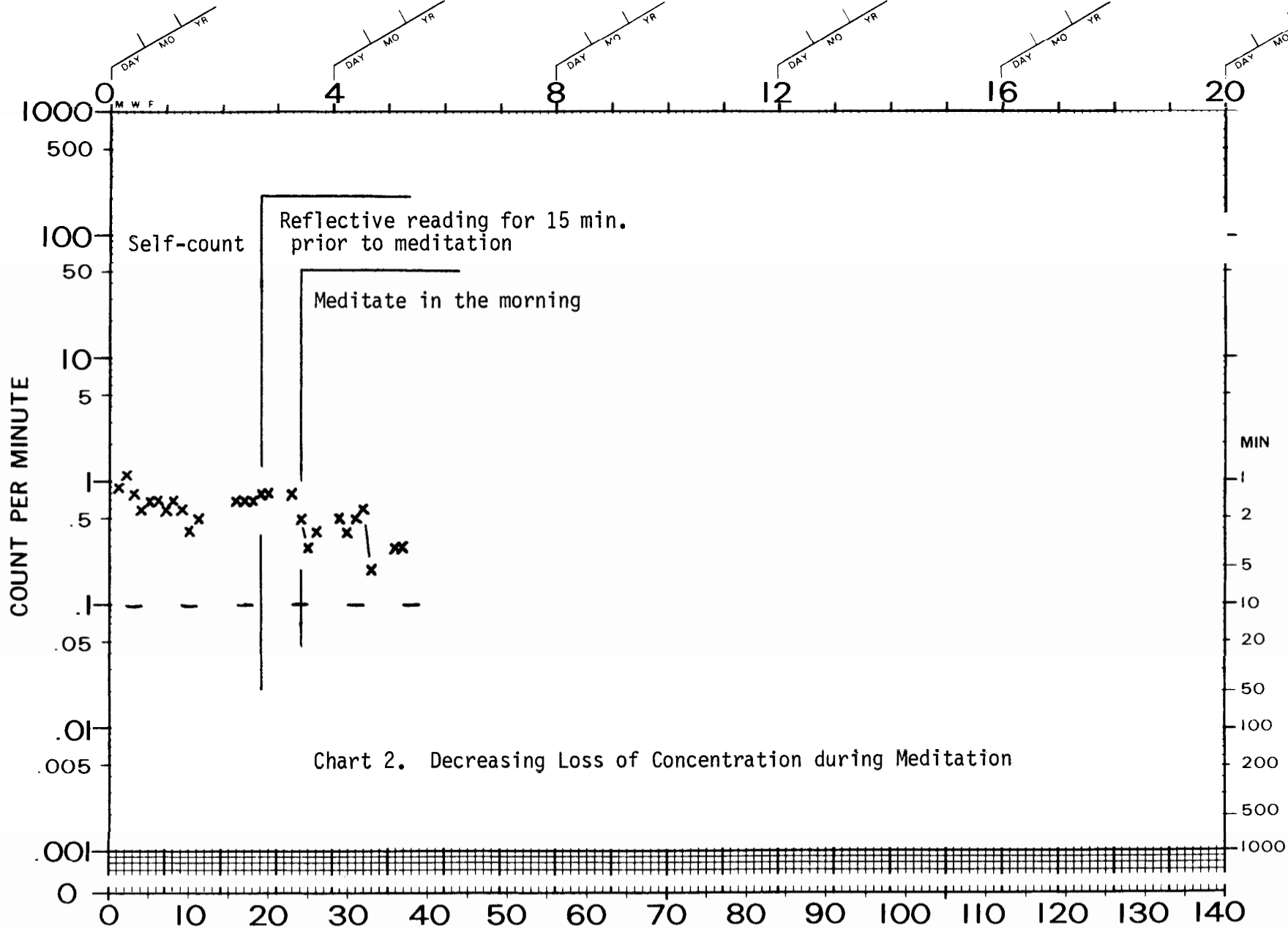
Chart 1. Increasing Specific Praise Statements

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|  |          |          |          |         |   |
|--|----------|----------|----------|---------|---|
| Marilyn  | M. Eaton | Peggy R. | Peggy R. | 21      | says specific praise statements or says |
| SUPERVISOR   | ADVISER  | MANAGER  | BEHAVIOR | AGE     | COUNTED                                 |
| Western Washington University Bellingham, Washington |          |          | COUNTER  | CHARTER | "good" or "OK"                          |
| AGENCY   |          |          |          |         |   |

CALENDAR WEEKS



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SUPERVISOR M. Eaton ADVISER S. Kidder MANAGER S. Kidder BEHAVIOR AGE loses concentration during meditation COUNTED

Western Washington University Bellingham, Washington

AGENCY COUNTER CHARTER

Leg strength was considered very important for developing this skill as an enormous strain is put upon the legs in what would normally be an awkward position. Therefore, an extensive weight training program was introduced as instruction (see Chart 3). In the second phase full front squats were dropped from the weight training because the strain on the knees caused by the Cossack dance was too much when combined with this exercise. In the third phase back squats were added to develop a different part of the leg muscle, and one legged deep knee bends were introduced because the movement is similar to the Cossack dance. In Phases 4 and 5 the assessment was changed to alternate days and the weight training reduced to two days a week because Ron found that overworking his muscles was counterproductive. Although Ron has not yet mastered Russian Cossack dancing, he did learn to do the squat kick with some degree of proficiency as Chart 3 and his demonstration of that skill for me in the hallway outside my office indicates.

The second group of projects used Precision Teaching skills to change the behaviors of other people. In the first example, a student used Precision Teaching to help solve the "damp newspaper syndrome." In the second project, a student helped middle school students learn to behave better in class by monitoring their teacher's behavior.

#### **Increasing the Accuracy of Newspaper Throws.**

Reuven, a newspaper boy, had difficulty throwing newspapers accurately. He could throw "on target" from short distances, but the style and speed of long distance throws often left the paper in the mudpuddle at the bottom of the stairs, in the driveway or the flower garden. Judy, a PT student and newspaper subscriber, was motivated by the loss of several papers to help Reuven increase his accuracy of newspaper throws.

For five days each week, Reuven and Judy met just outside her apartment. Reuven stood at the top of the stairwell (approximately 1 meter high) and 5.5 meters from a target (the doormat). The behavior measured was the number of centimeters from the target on a single throw. During the baseline assessment, Reuven typically was close to 100 cm from the target (see Chart 4). Judy then began practice sessions with Reuven to help him increase his accuracy. These practice sessions had the desired effect of helping him land the newspaper closer to the mat. As Reuven became more accurate, Judy introduced a practice "fake throw." She asked Reuven to visualize how the paper would travel to the mat and to imagine it landing on the mat before throwing. During this instructional phase, Reuven was able to meet his goal of two

consecutive mat "hits" in a row and Judy happily read dry papers.

**Decreasing Talk-outs.** Tom was assigned to a middle school special education class for his Precision Teaching practicum. He was asked to collect data by the teacher on the talk-outs of her students during a thirty minute class discussion period. Chart 5 shows the data from one representative student. Don did have a problem with blurting out the answers and talking out. His hand raises occurred about once every ten minutes and the talk-outs occurred more frequently. Tom noticed however, that often when students blurted out the answer, the teacher responded to them anyway and allowed them to answer the question. He decided that the most effective way to decrease talk-outs would be for the teacher to change her behavior. Fortunately, the teacher held the same opinion and asked Tom to give her feedback each day on the number of times she required students to raise their hands and the number of times she forgot (see Chart 6). As Charts 5 and 6 indicate, as the teacher changed her behavior, the target student also increased hand raising and decreased his talk-out behaviors.

These examples are just a few gleaned from the years of Precision Teaching classes. They are intended to stimulate students and practitioners alike to think about areas outside the domain of simple academic skills that would benefit from careful definition and monitoring.

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#### **ALL THE KNOWN PRECISION TEACHING REFERENCES**

**John W. Eshleman**  
West Virginia University

In this article I describe the results of a two-year-long literature search, where the object of the search was to track down and obtain all of the Precision Teaching and/or Standard Celeration Chart references.

I conducted this search mostly out of interest. For me it proved to be a rather entertaining enterprise. The strategy in doing it was not to acquire the most salient references, but rather to try to get all of them. The resulting compilation holds considerable practical utility as well--one reason why I use the term "data-base."

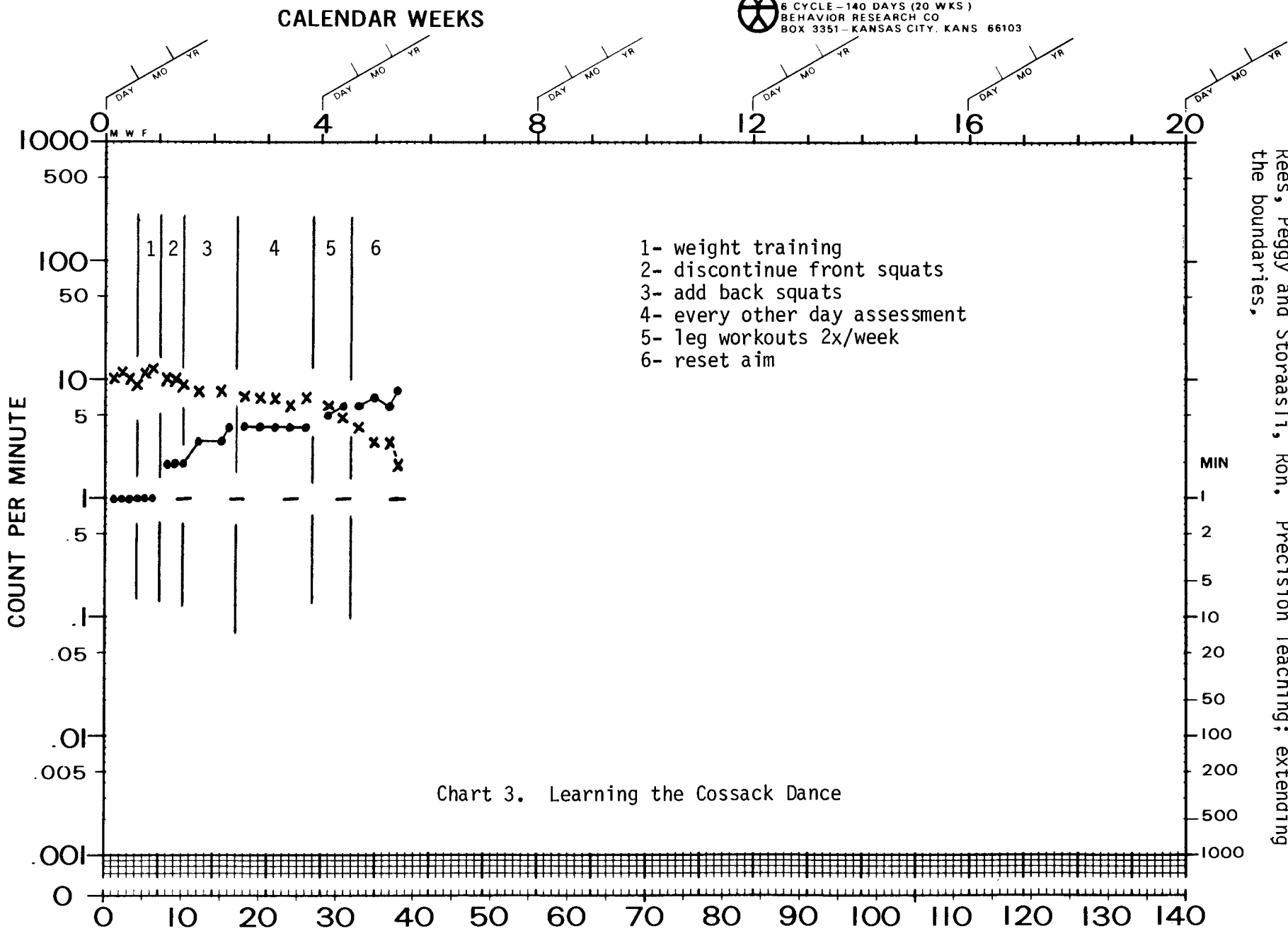


Chart 3. Learning the Cossack Dance

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|  |         |              |                          |         |              |     |                                   |
|--|---------|--------------|--------------------------|---------|--------------|-----|-----------------------------------|
| M. Eaton   |         | R. Storaasli | SUCCESSIVE CALENDAR DAYS |         | R. Storaasli | 24  | performs squat kicks correctly or |
| SUPERVISOR   | ADVISER | MANAGER      |                          |         | BEHAVIOR     | AGE | COUNTED                           |
| Western Washington University Bellingham, Washington |         |              |                          |         |              |     | incorrectly                       |
| AGENCY   |         |              | COUNTER                  | CHARTER |              |     |                                   |



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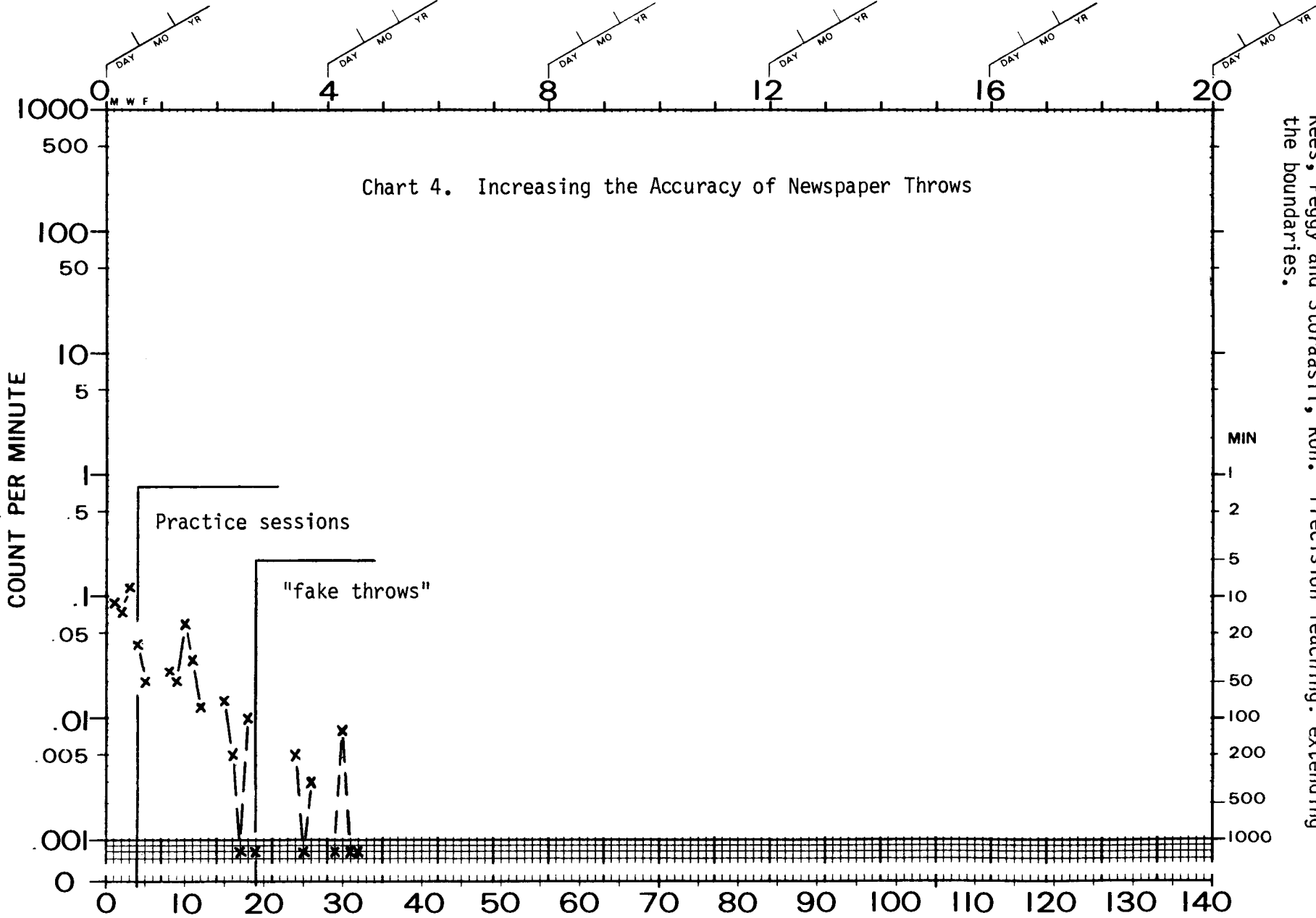


Chart 4. Increasing the Accuracy of Newspaper Throws

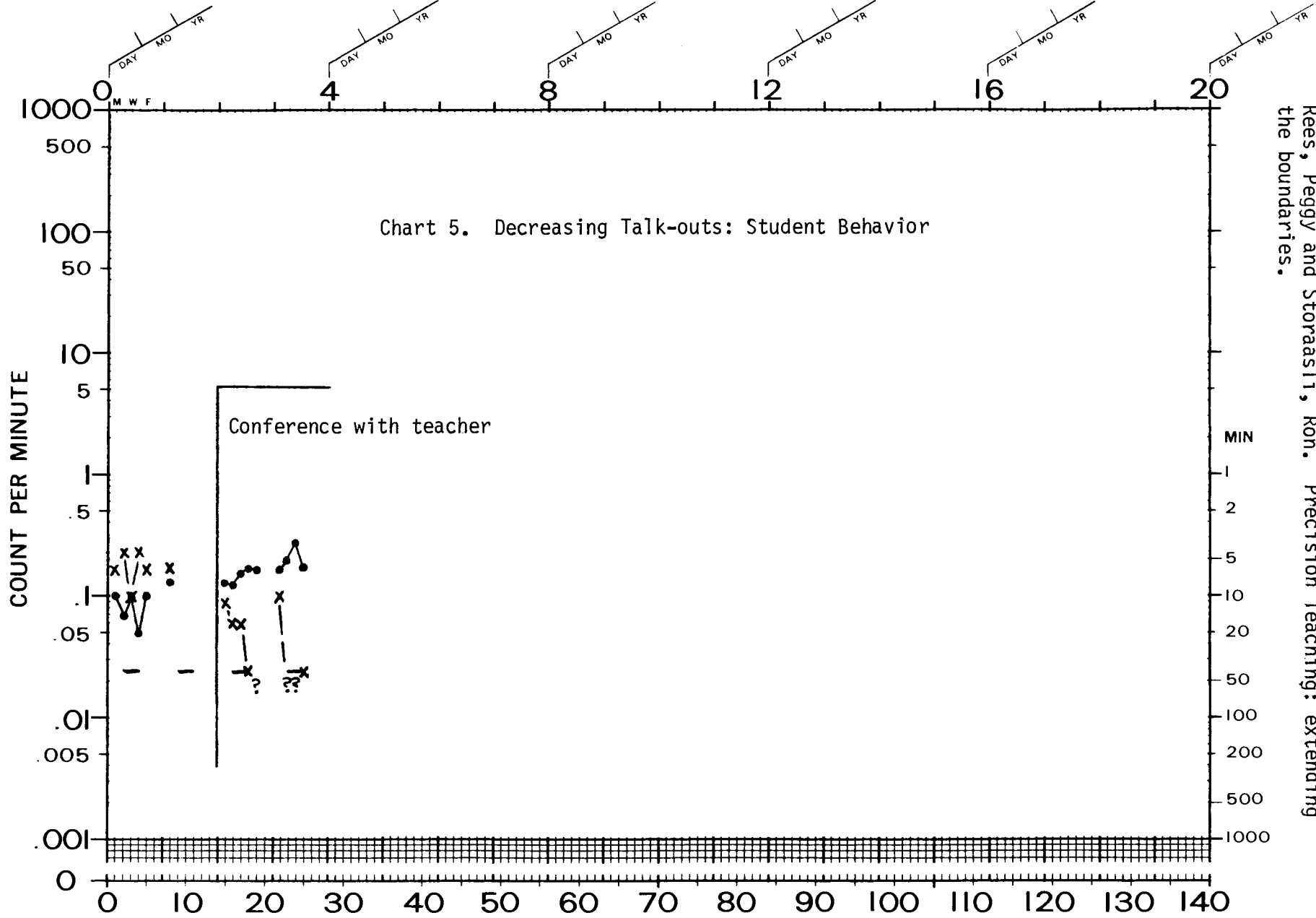
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|                               |         |                        |                       |     |
|-------------------------------|---------|------------------------|-----------------------|-----|
| M. Eaton                      |         | Judy                   | throws a newspaper    |     |
| SUPERVISOR                    | ADVISER | MANAGER                | Reuven                | 12  |
| Western Washington University |         | Bellingham, Washington | BEHAVIOR              | AGE |
| AGENCY                        |         | COUNTER                | CHARTER               |     |
|                               |         |                        | ? cm from the doormat |     |



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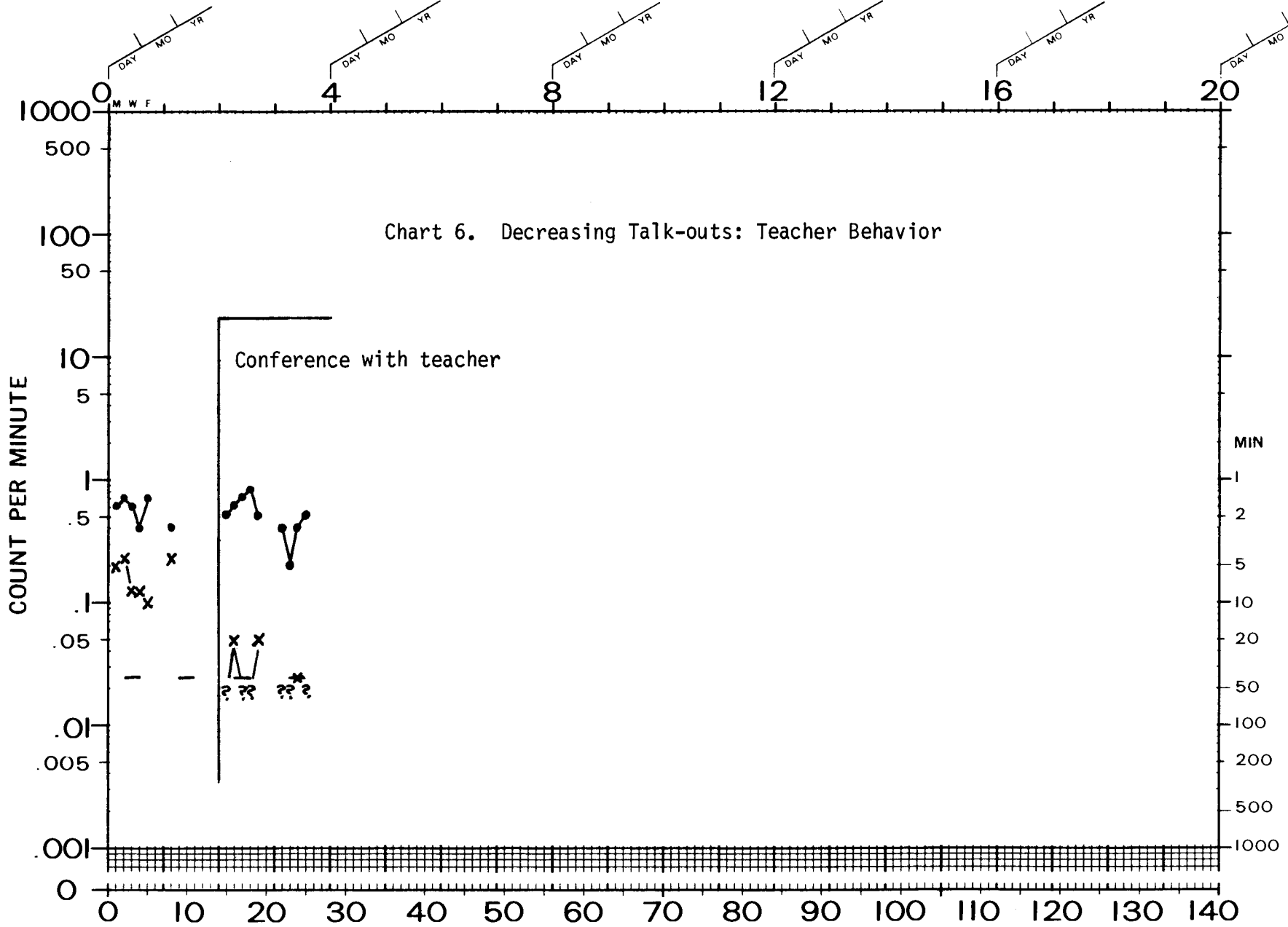
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|  |         |             |                          |         |          |     |                             |
|--|---------|-------------|--------------------------|---------|----------|-----|-----------------------------|
| M. Eaton   |         | T. Anderson | SUCCESSIVE CALENDAR DAYS |         | Don      | 12  | raises hand or<br>talks out |
| SUPERVISOR   | ADVISER | MANAGER     |                          |         | BEHAVIOR | AGE | COUNTED                     |
| Western Washington University Bellingham, Washington |         |             |                          |         |          |     |                             |
| AGENCY   |         |             | COUNTER                  | CHARTER |          |     |                             |



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| SUPERVISOR |             | AGENCY                        |                        | COUNTER | CHARTER          | calls on students with(●) or without(x) their hands raised |         |
|------------|-------------|-------------------------------|------------------------|---------|------------------|--|---------|
| M. Eaton   | T. Anderson | Western Washington University | Bellingham, Washington |         | teacher BEHAVIOR | AGE  | COUNTED |