

# **Producing Astonishing Organizational Results**

John Austin

Western Michigan University

# Goals

1. Tell you how to apply OBM techniques in 5 steps.
2. Give you some examples of how it has been applied in the past.

**An organization truly  
succeeds only when its  
members achieve results,  
execution, and discretionary  
effort.**

# Results/Execution/Discretionary Effort

John Austin - BSN 2006 - Keynote Address

[John.austin@wmich.edu](mailto:John.austin@wmich.edu)

***Behavior*** is the key to getting  
great execution,  
discretionary effort, and  
lasting results.

Results/Execution/Discretionary Effort



Behavior

***Applied Behavior Analysis (ABA)***  
is the key to understanding  
behavior.

Results/Execution/Discretionary Effort

Behavior

Applied Behavior Analysis  
(ABA)

OBM (Organizational Behavior Management) is the science of applying ABA in organizations.

It's been around for 30 years or more.  
There are LOTS of data to show that it works.

Results/Execution/Discretionary Effort

Behavior

Applied Behavior Analysis  
(ABA)

Organizational Behavior Management  
(OBM)

Scientific thinking enables consistent organizational improvements and organizational learning.

Results/Execution/Discretionary Effort

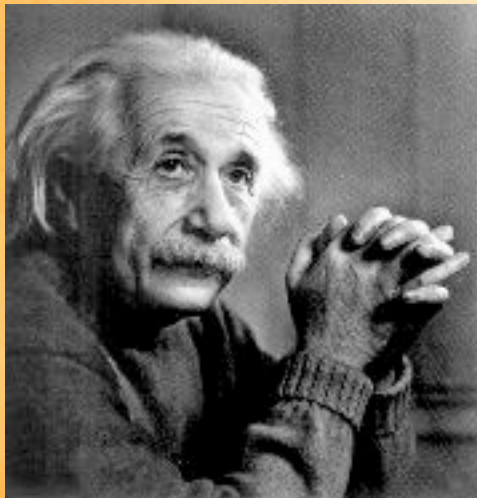
Behavior

Applied Behavior Analysis  
(ABA)

Organizational Behavior Management  
(OBM)

Science

# Why is scientific thinking so important?



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[John.austin@wmich.edu](mailto:John.austin@wmich.edu)

# Common Myths

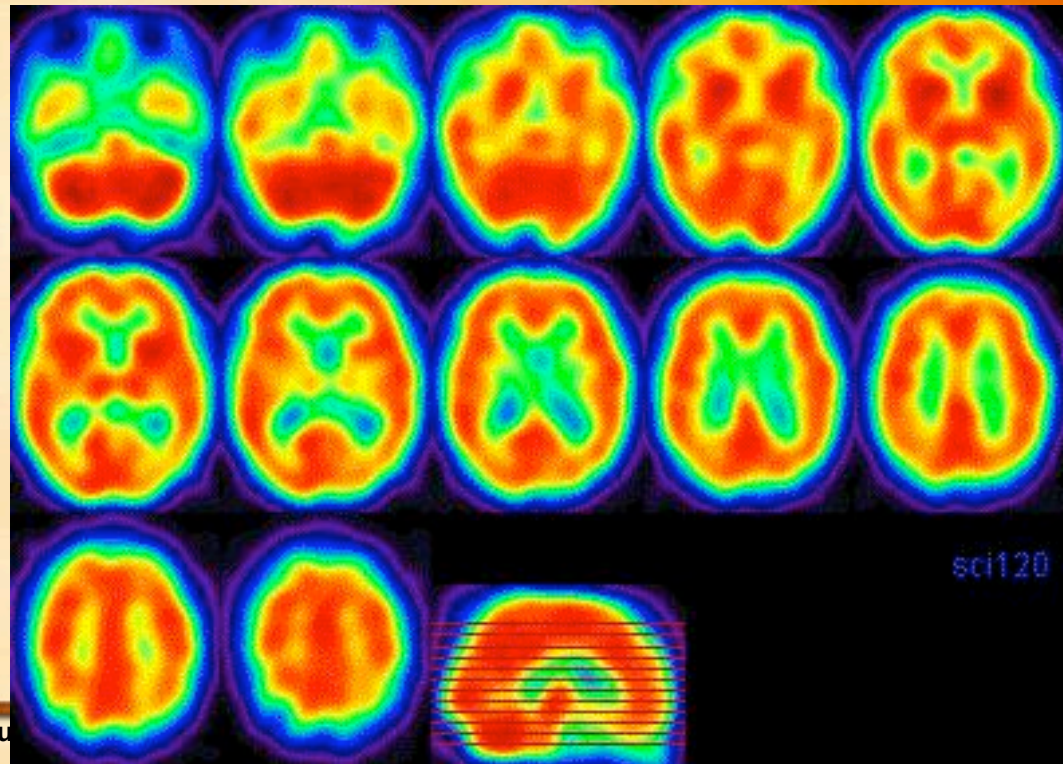
My brain is 10% as large as your brain!



We use 10% of our brain.

- FALSE. We use all of our brain.

Black areas are those not "in use".



John Au

John.austin@wmich.edu

# Common Myths

The Atkins Diet works because...

- It changes your metabolism from carbohydrate-burning to fat-burning.
- FALSE.
- It reduces the number of calories you eat. You lose weight.

" I LOST  
**55 LBS.\***  
ON ATKINS!"

Cindy S.

**Before**

**After**

Benefits of the  
**Atkins Plan:**

- ✓ Intelligent consumption of carbs
- ✓ Low glycemic impact
- ✓ Low in sugar, high in fiber, with balanced fats
- ✓ Personalized weekly meal plans
- ✓ "Print & Go" shopping lists

\*Results not typical

# More Myths...

- No Nobel Prize is awarded for mathematics because Alfred Nobel's wife had an affair with a mathematician.
- A special compound added to the water in swimming pools will reveal the presence of urine.
- Pouring salt water into their coin slots will induce vending machines to dispense free product.
- Eelskin wallets demagnetize credit cards due to leftover charges from the electric eels used to make them.
- Tapping the side of a soda can will prevent its contents from foaming over when you open it.
- The average person swallows eight spiders per year.
- The Great Wall of China is the only man-made object visible from the moon.
- The number of people alive today is greater than the number of people who have ever died.
- Men think about sex every seven seconds.

# Why Scientific Thinking?

Scientific thinking causes us to question, learn, and continuously improve.

# What's So *Astonishing* About This?

1. OBM (a scientific approach to management) produces *dramatic* effects.
  - Some think that 10% is big jump.
  - Using OBM and BBS, it is not unusual to see 2-fold increases.
  - Sometimes we see 8 to 10-fold increases.
  - This means enormous changes in *the way we do things* at work.

# What's So *Astonishing*...?

2. It changes the way people see work.
  - Encountering a problem and solving it - changes our role at work
  - Talk to someone who has succeeded in using these concepts - do you see or hear anything different?

This is what led Dick Malott to coin the phrase,  
“Saving the world with behavior analysis”

# Goals

1. Tell you how to apply OBM techniques in 5 steps.
2. Give you some examples of how it has been applied in the past.

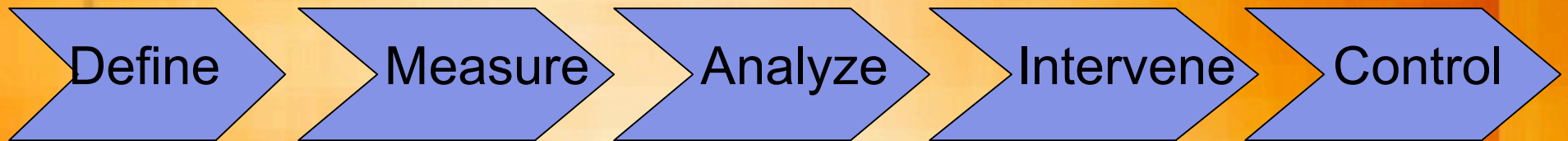
# GOAL #1

## How to “Do” OBM

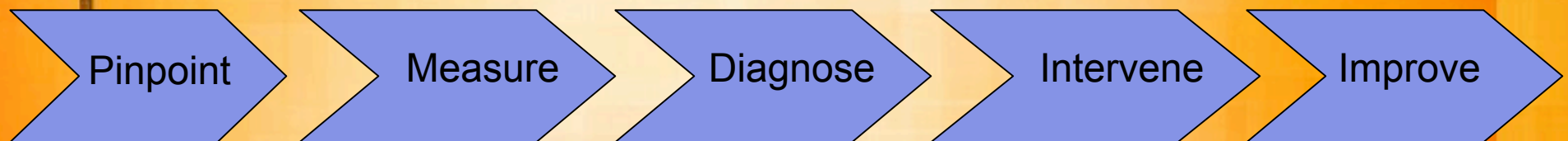
1. PINPOINT
  - Identify pinpoints
2. MEASURE
  - Develop a measurement system
3. DIAGNOSE
  - Diagnose the problem
4. INTERVENE
  - Develop, communicate, and implement a solution
5. EVALUATE & IMPROVE

# Does this look familiar?

## Six Sigma Process



## The OBM Process



# Some *OBM* Studies

- Studies demonstrating OBM:
  - Improving telephone courtesy of healthcare workers
  - Improving sales
  - A lottery system to improve human services employee performance
  - Increasing anesthesia nurse compliance with universal precautions
  - Improving data entry skills and billing for construction foremen
  - Improving office ergonomics
  - Increasing customer service of staff at a large dept store
  - Improving safety training for agricultural workers

# (More) OBM Studies

- Improving safety of truck drivers
- Improving safety of bus drivers
- Reducing turnover of human services staff
- 10-15 studies on effects of incentives on work behavior
- Decreasing retail cash register shortages
- Reducing rejects and waste in a manufacturing setting using feedback and goal setting
- Increasing safety belt use and safe driving among delivery drivers

# (More) OBM Studies

- Improving therapist performance in psychiatric homes
- Self management training for employees' self-improvement
- Improving doctor performance using feedback
- Reducing medical errors using OBM
- Improving courtesy among police staff
- Quality control in a large shipping organization
- Training software use

# (More) OBM Studies

- Reducing absenteeism
- Improving time management
- Improving meeting effectiveness and follow-up
- Improving safety in every imaginable industry
  - that's right, we're talking about the same basic principles as used in BBS.

# GOAL #1

## How to “Do” OBM

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# GOAL #2

## Present Examples of OBM Applications

In 3 areas:

- Productivity
- Quality
- Safety

These three ARE compatible.

They are products of behavior.

They are subject to the laws of behavior analysis.

Most examples come from *Journal of Organizational Behavior Management*.

# Journal of Organizational Behavior Management

## Volume 1, Number 1. Summer (1977)

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# PRODUCTIVITY IMPROVEMENT

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[John.austin@wmich.edu](mailto:John.austin@wmich.edu)

PERCENT ABSENTEEISM

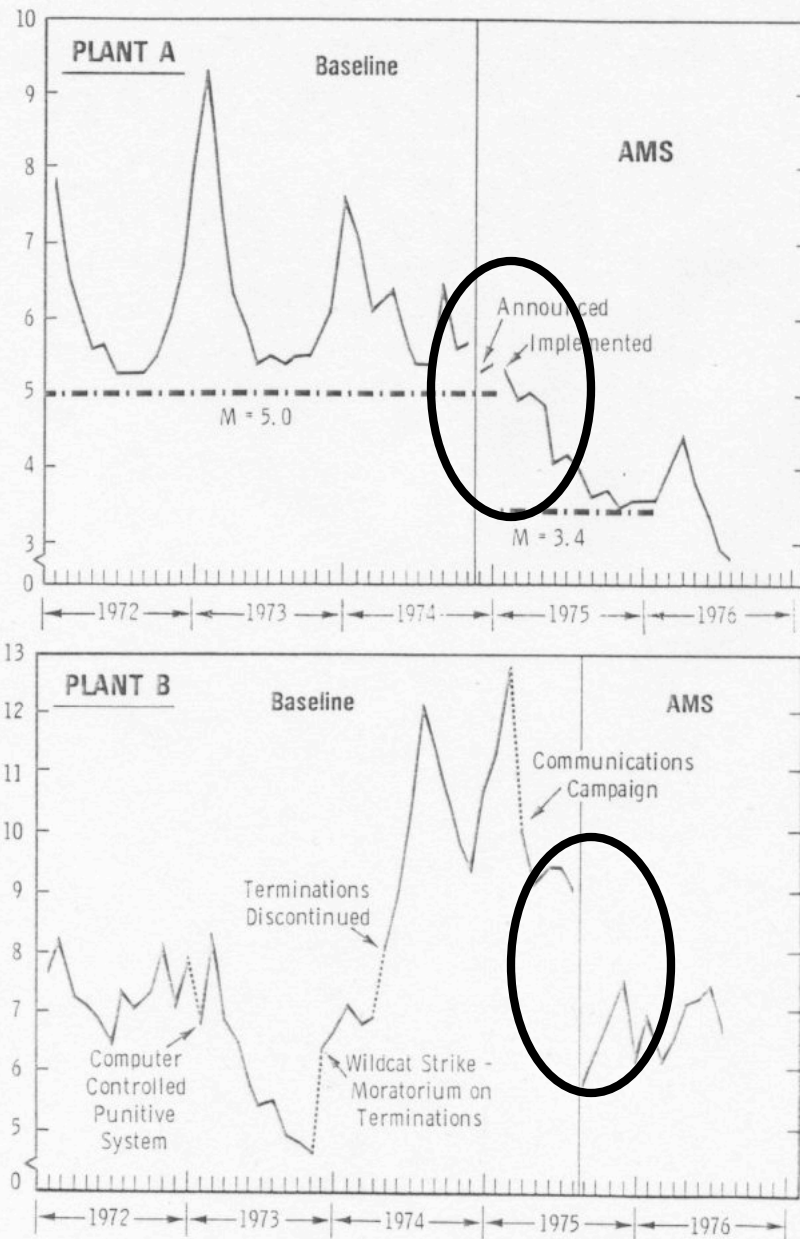
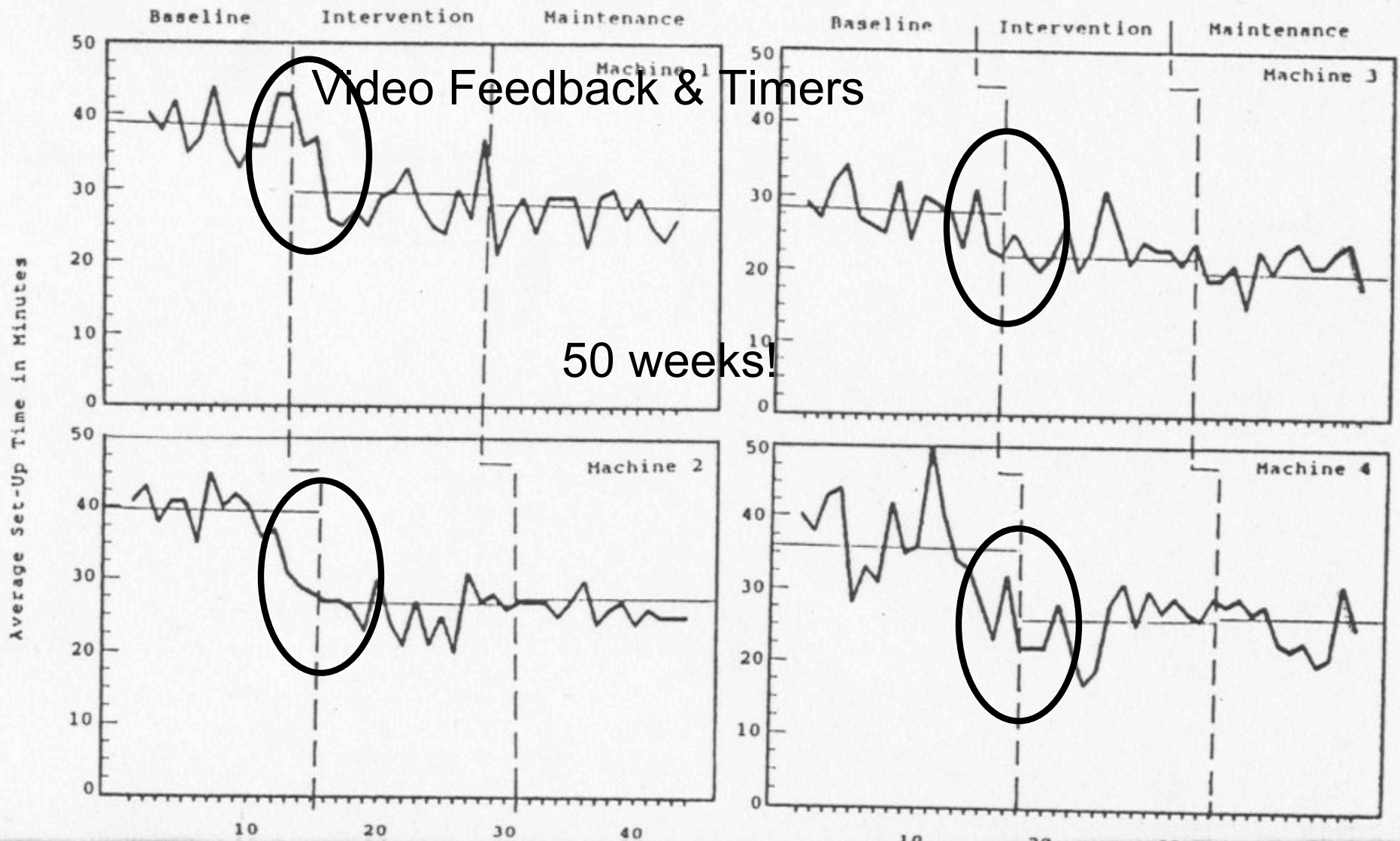


Fig. 1. Absence rates for hourly employees at experimental Plants during baseline and experimental conditions. The dashed lines show the means for Plant A employees who were still on roll as of the end of 1975; equivalent data for Plant B employees were not available.

- Kempen & Hall, 1977
- 7500 workers
- 2 plants
- 5 years of data
- solution: "Absenteeism management system"
- R+ for attendance
- progressive discipline for absenteeism

# Wittkopp, Rowan, & Poling, 1990 - Rubber Extrusions Plant Decreasing Machine setup times

FIGURE 1. Average weekly set-up time for each machine during all weeks of the study. Machine 1 was being repaired during weeks 43 and 44, hence no data are reported.



Wikoff, Anderson, & Crowell, 1983

Efficiency increase equal to 800 labor/hrs/wk (20 FTE)

160 employee plant

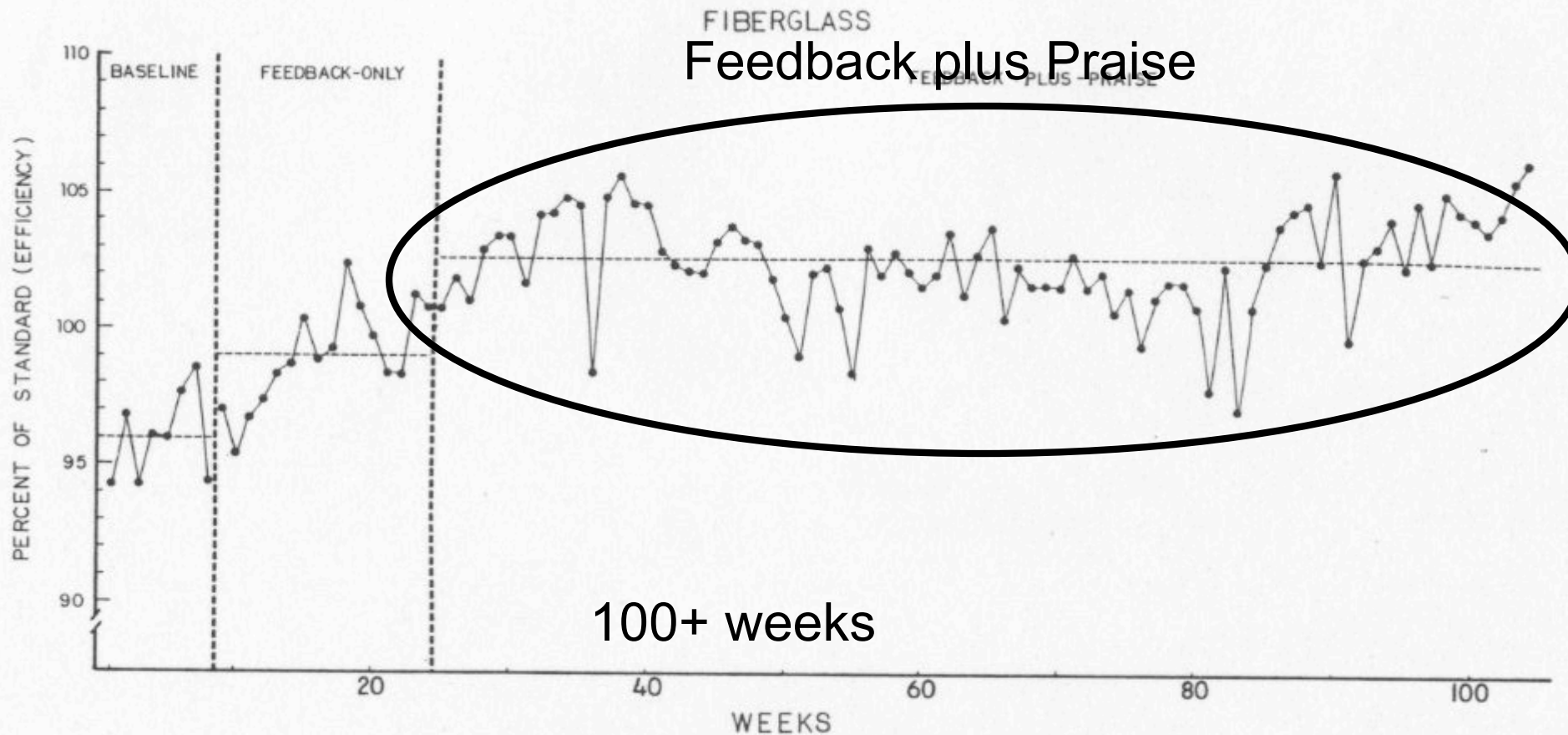
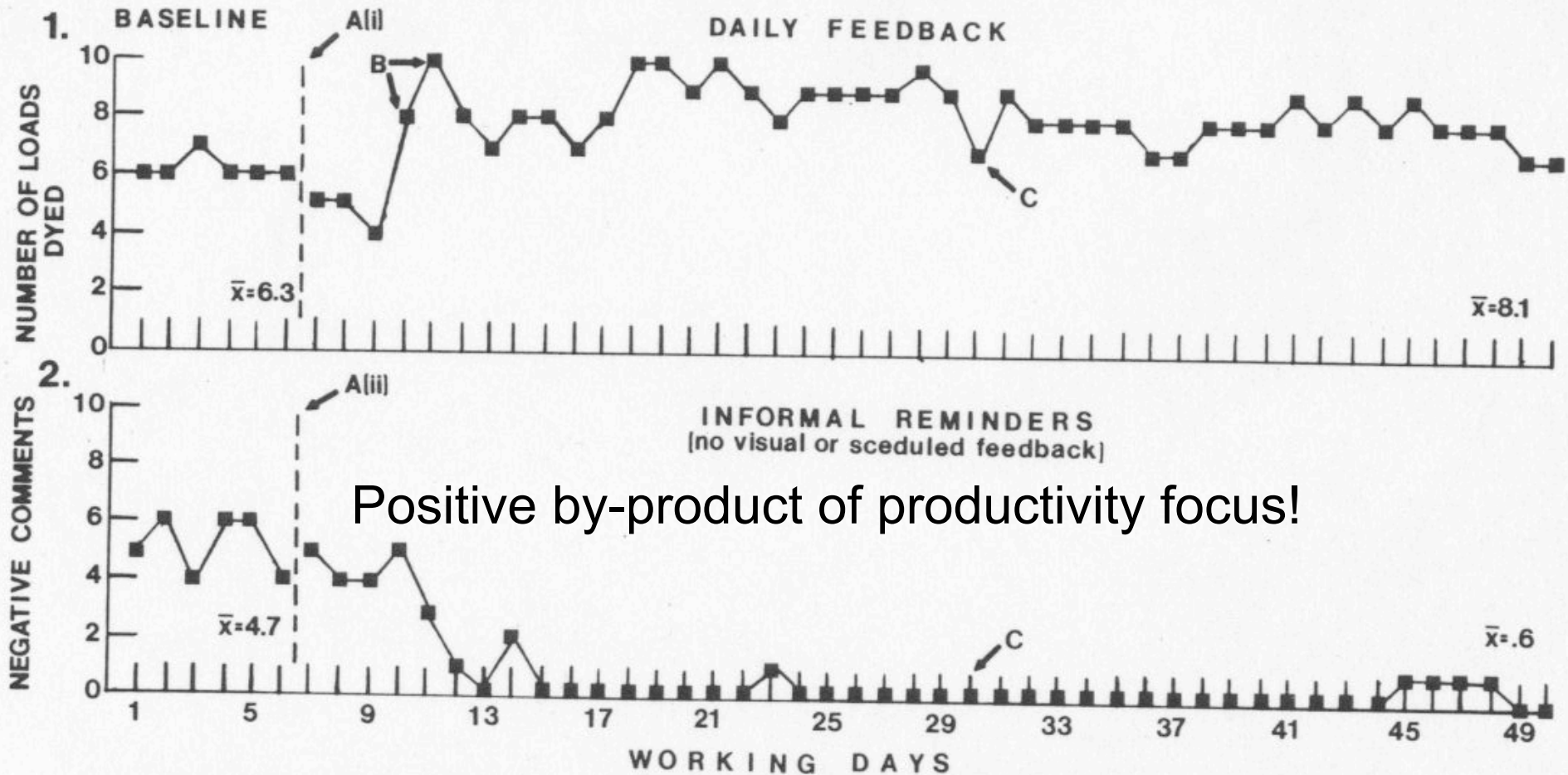


FIGURE 3. Mean weekly efficiency for the Fiberglass department.

# Chandler, 1977

## Textile manager performance



Positive by-product of productivity focus!

Figure 1. (1) The number of loads dyed before and after the initiation of daily measurement and feedback. (2) The number of negative comments made before and after the initiation of unpublished (excepting occasion C) measurement and irregular, informal reminders. A(i) indicates when the productivity measurement graph was revealed and the review procedure explained. A(ii) indicates when the supervisor was informed that his negative comments were being counted. B indicates when reinforcement was begun. C indicates the occasion when the supervisor was shown a graph comparing the number of loads dyed to the number of his negative comments.

# GOAL #1

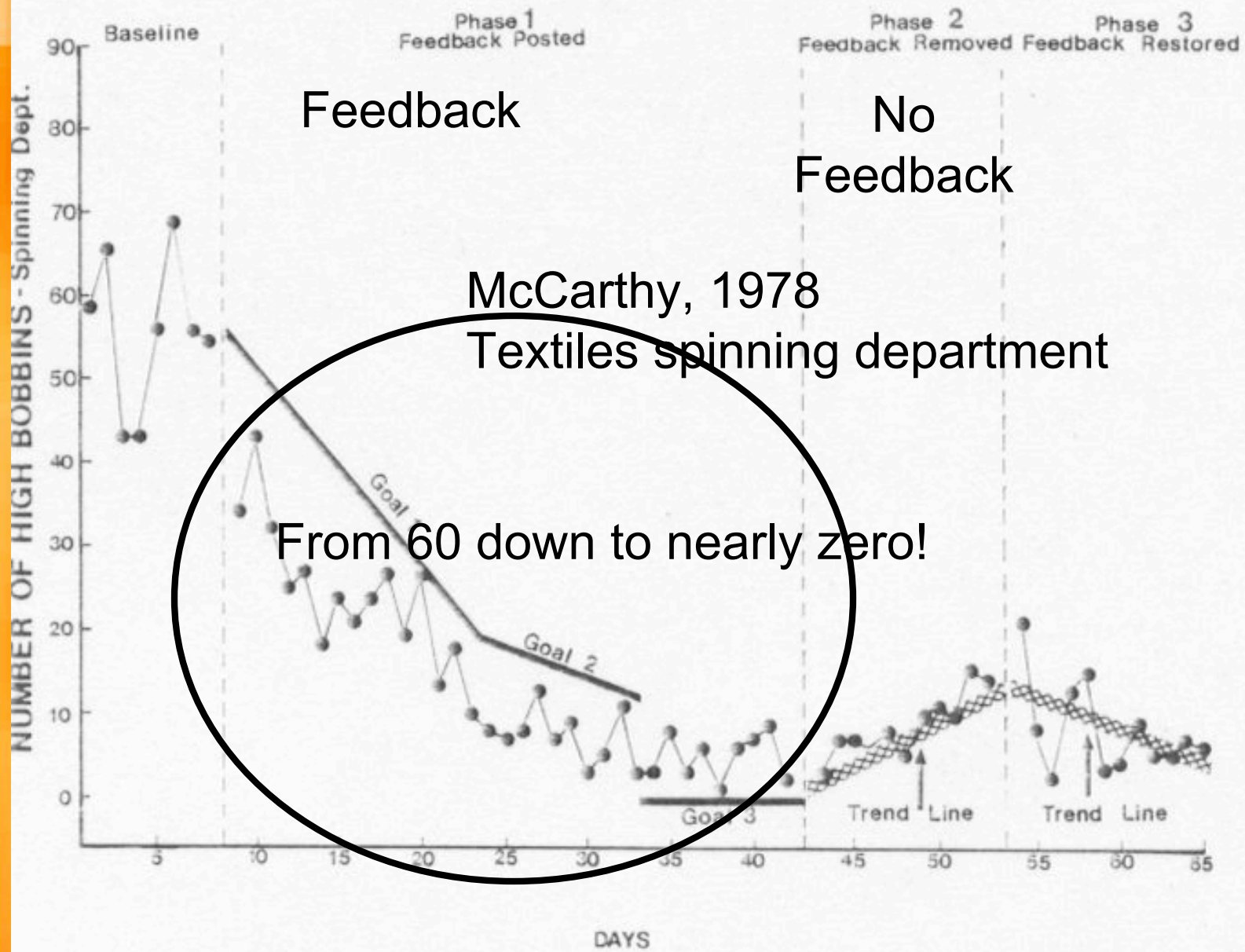
## How to “Do” OBM

1. PINPOINT
  - Identify pinpoints
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5. EVALUATE & IMPROVE

# QUALITY IMPROVEMENT

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[John.austin@wmich.edu](mailto:John.austin@wmich.edu)

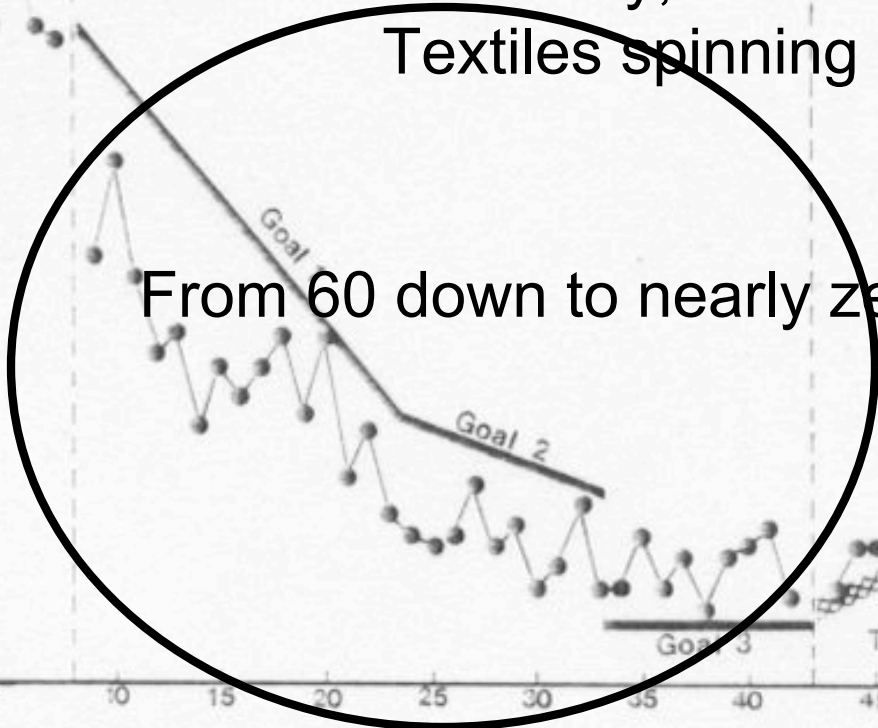


Feedback

No  
Feedback

McCarthy, 1978

Textiles spinning department



From 60 down to nearly zero!

Figure 1. Numbers of high bobbins during Baseline and all phases of the project.

Runnion, Watson, & McWhorter,  
1978

-59% reduction in fuel  
purchases.

-Tangible R+, graphs, letters  
home, Social R+

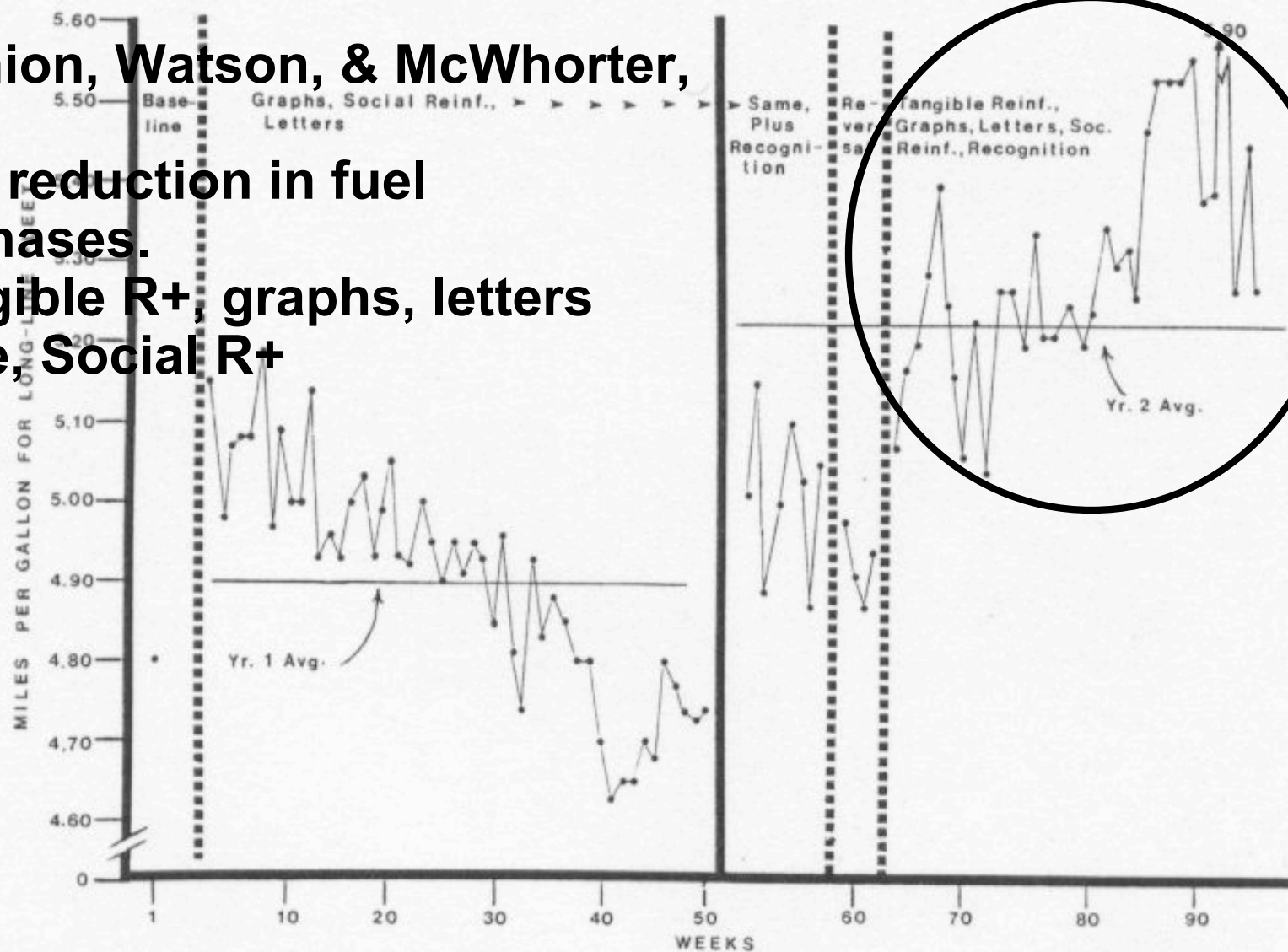
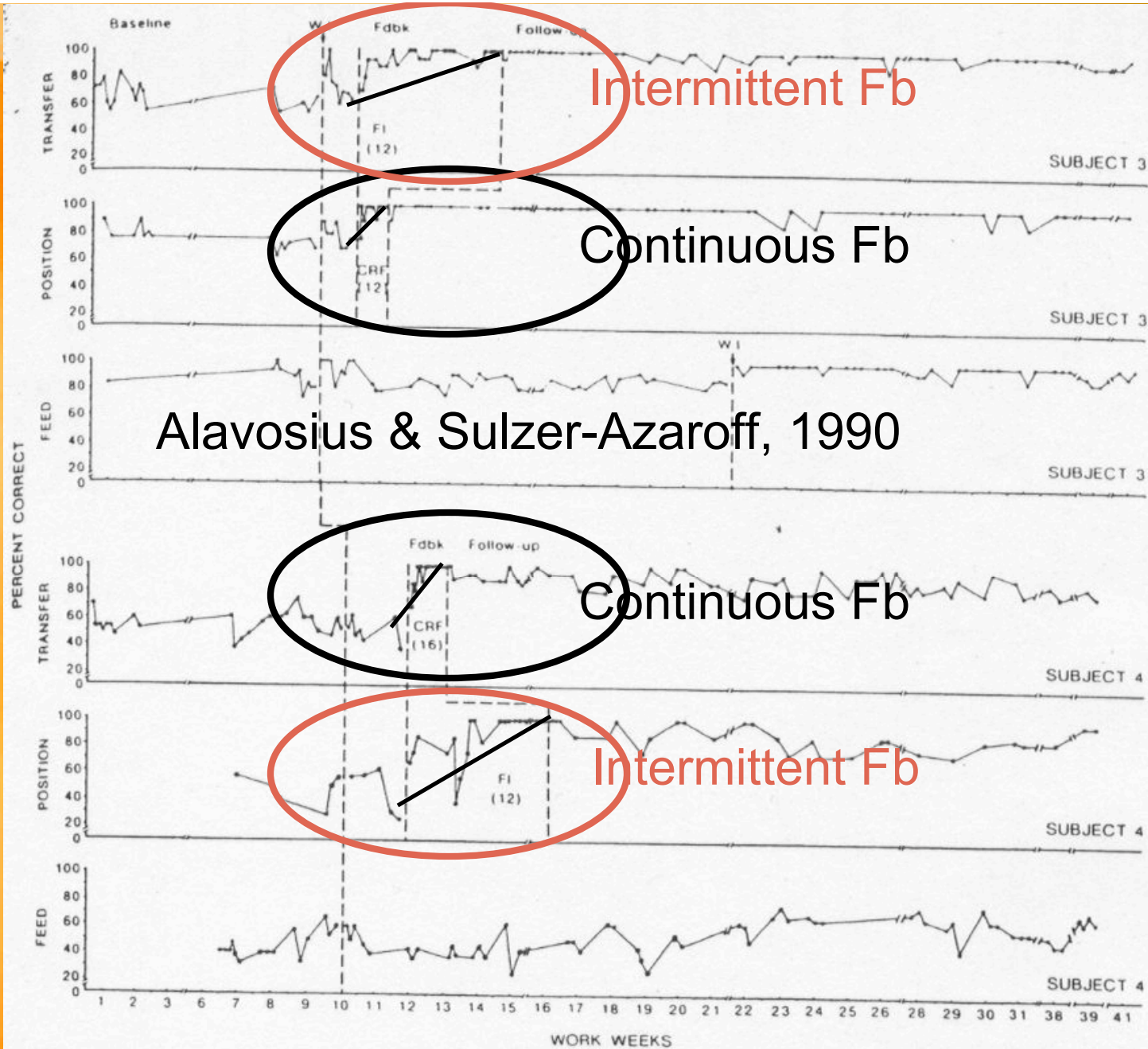


Figure 3. The miles per gallon data for the long-line fleet drivers for the two years of Study 2. Miles per gallon averaged 4.80 during the one-week baseline and rose to 4.90 during the first year. During the first eight weeks of the second year, miles per gallon averaged 5.01. This dropped to 4.93 during Reversal. For the remainder of the second year, miles per gallon averaged 5.31. The mean for all of the second year was 5.23.



Alavosius & Sulzer-Azaroff, 1990

Figure 2. The percentage of each task performed correctly by Subjects 3 and 4 during each condition. WI = written instruction; FI = fixed-interval feedback; CRF = continuous feedback. Breaks in the timeline indicate employee absences (due to holidays, vacations, etc.).

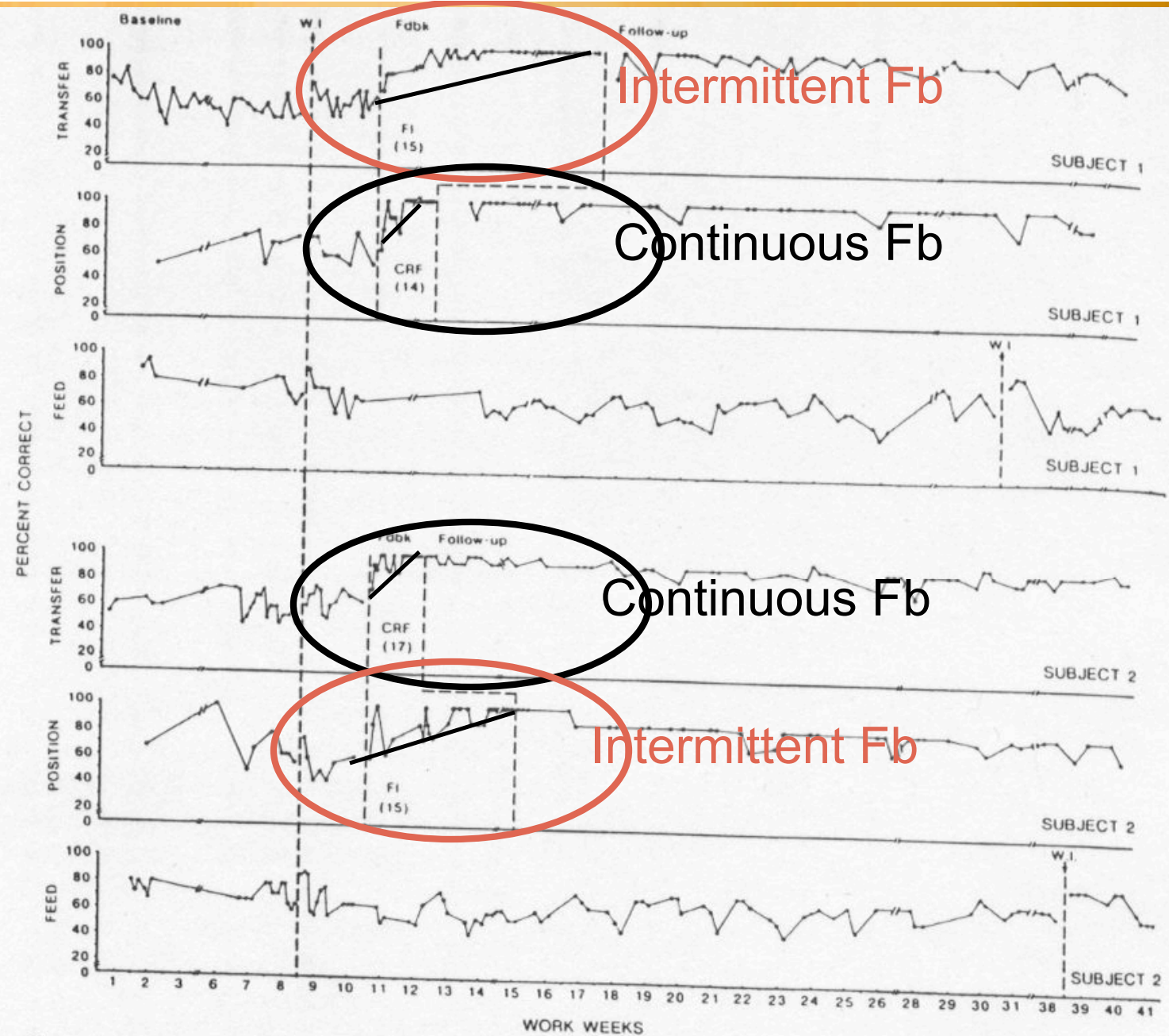
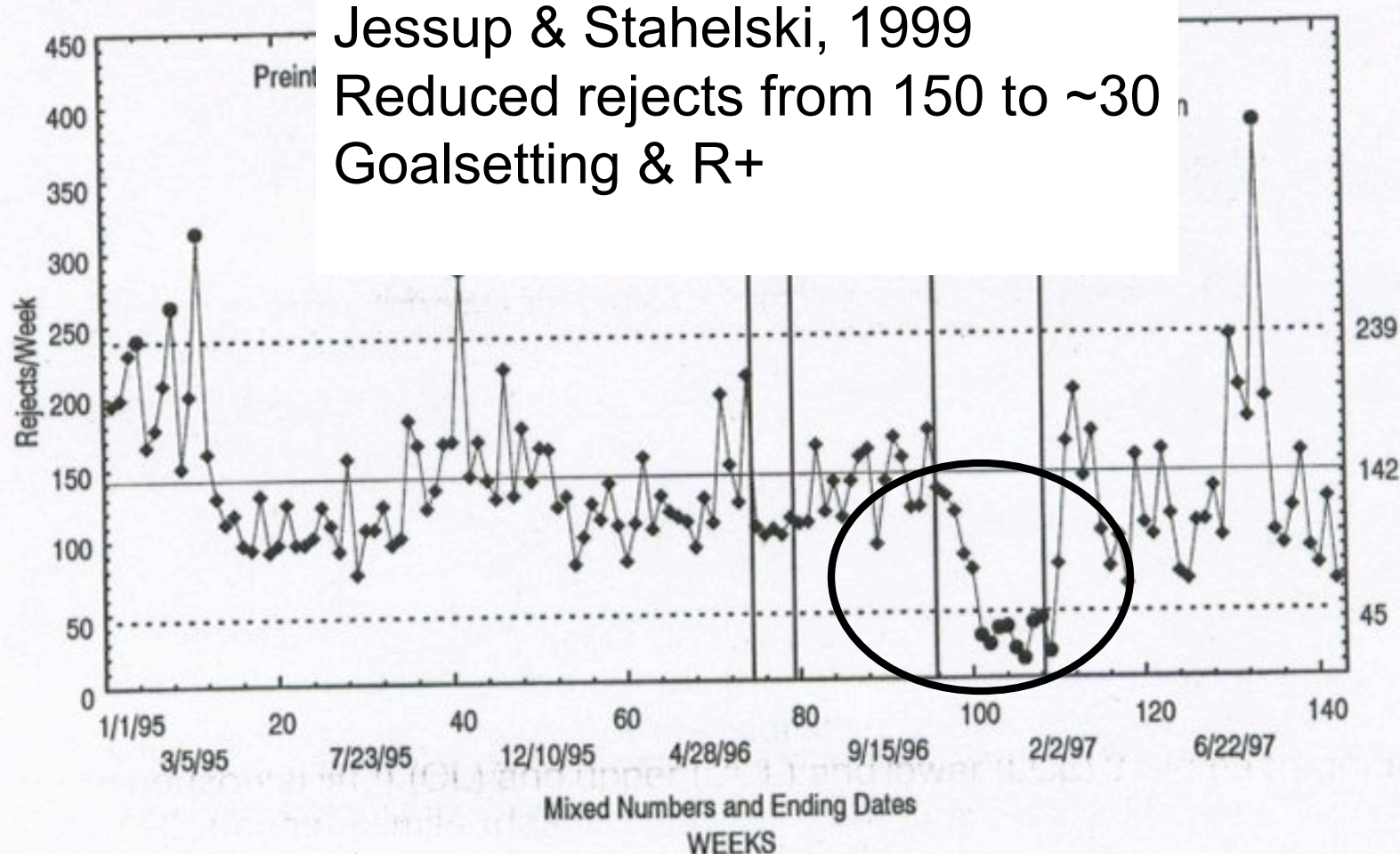


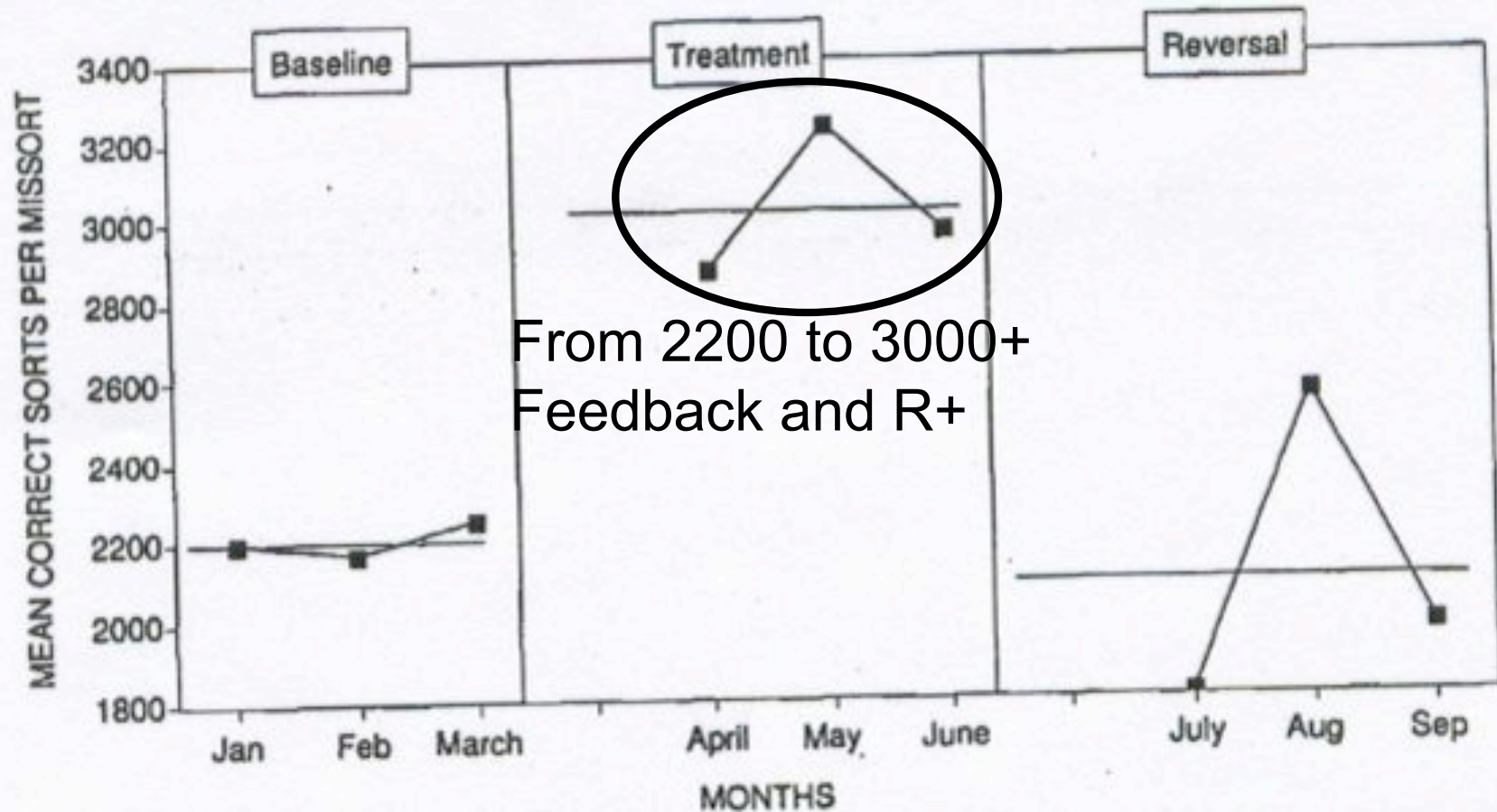
Figure 1. The percentage of each task performed correctly by Subjects 1 and 2 during each condition. W.I. = written instruction; FI = fixed-interval feedback; CRF = continuous feedback. Breaks in the timeline indicate employee absences (due to holidays, vacations, etc.).

FIGURE 1. Baked anode rejects January 1995 to September 1997. The X-axis is mixed; it includes numbered order of weeks (1-142) alternating with dates (1/1/95-9/14/97). Values of the statistical process control centerline (solid horizontal line) (CL) and upper (UCL) and lower (LCL) 3 Sigma (Sigma = 32.1955) control limits (dashed horizontal lines) appear adjacent to each line on the right horizontal axis.



# Kortick & O'Brien, 1996

FIGURE 4. Facility wide mean number of packages sorted correctly for every missorted package baseline through reversal (company standard = 3000).



From 2200 to 3000+  
Feedback and R+

Godat & Brigham, 1999  
Teaching self-management strategies:

- Assertiveness
- Question asking
- Positive comments
- Decreasing socializing
- Decreasing negative responses
- Increasing phone calls returned
- Increasing exercise
- Decreasing fat intake
- Decreasing snacking

John Austin - BSN 200

John.austin@

TABLE 1

<u>Titles of the Self-Management Projects</u>	<u>Behavior Measured</u>	<u>Results: Means</u>
Social Skill Issues:		
Increasing Assertiveness	Initiating discussions with boss	Baseline: .47 responses/day Intervention: 3.21 responses/day
Increasing Assertiveness	Speaking up to boss and coworkers about excessive assignments	Baseline: .80 responses/day Intervention: 3.3 responses/day
Increasing Assertiveness	Speaking up with coworkers when confronted and in social gatherings	Baseline: 1.4 responses/day Intervention: 3.14 responses/day
Increasing Assertiveness	Saying "no" excessive requests	Baseline: .67 responses/day Intervention: 1.5 responses/day
Increasing Assertiveness	Speaking up when confronted	Baseline: 0 responses/day Intervention: 2.5 responses/day
Increasing Assertiveness	Avoidance responses to work assignment requests	Baseline: 1.17 responses/day Intervention: .25 responses/day
Increasing Question Asking	Questions asked of conversant in social situations	Baseline: .6 questions/day Intervention: 8.45 questions/day
Increasing Question Asking	Questions asked to clarify work assignments	Baseline: 4.2 questions/day Intervention: 7.29 questions/day
Increasing Paraphrases	Paraphrasing when work assignment ambiguous	Baseline: 3.6 paraphrases/day Intervention: 3.8 paraphrases/day
Increasing Positive Comments	Pleasant greetings and responses to staff	Baseline: 1.33 comments/day Intervention: 2.8 comments/day
Increasing Positive Comments	Compliments and thanks delivered to coworkers	Baseline: 0 comments/day Intervention: .86 comments/day
Increasing Positive Comments	Compliments delivered to staff	Baseline: 1.78 comments/day Intervention: 3.73 comments/day
Increasing Positive Comments	Complimenting problem employee for good work	Baseline: 2.8 comments/day Intervention: 5.4 comments/day
Decreasing Socializing	Time spent socializing on non-work issues	Baseline: 19.54 min/day Intervention: 7.52 min/day
Decreasing Personal Phone Calls	Time spent on personal phone calls	Baseline: 18.89 min/day Intervention: 9.18 min/day
Decreasing Negative Responses to Work Issues	Negative responses to work situations	Baseline: 1.33 responses/day Intervention: .38 responses/day
Decreasing Negative Responses to Coworkers	Ignoring/walking away from complaining coworkers	Baseline: 1.4 responses/day Intervention: 3.87 responses/day

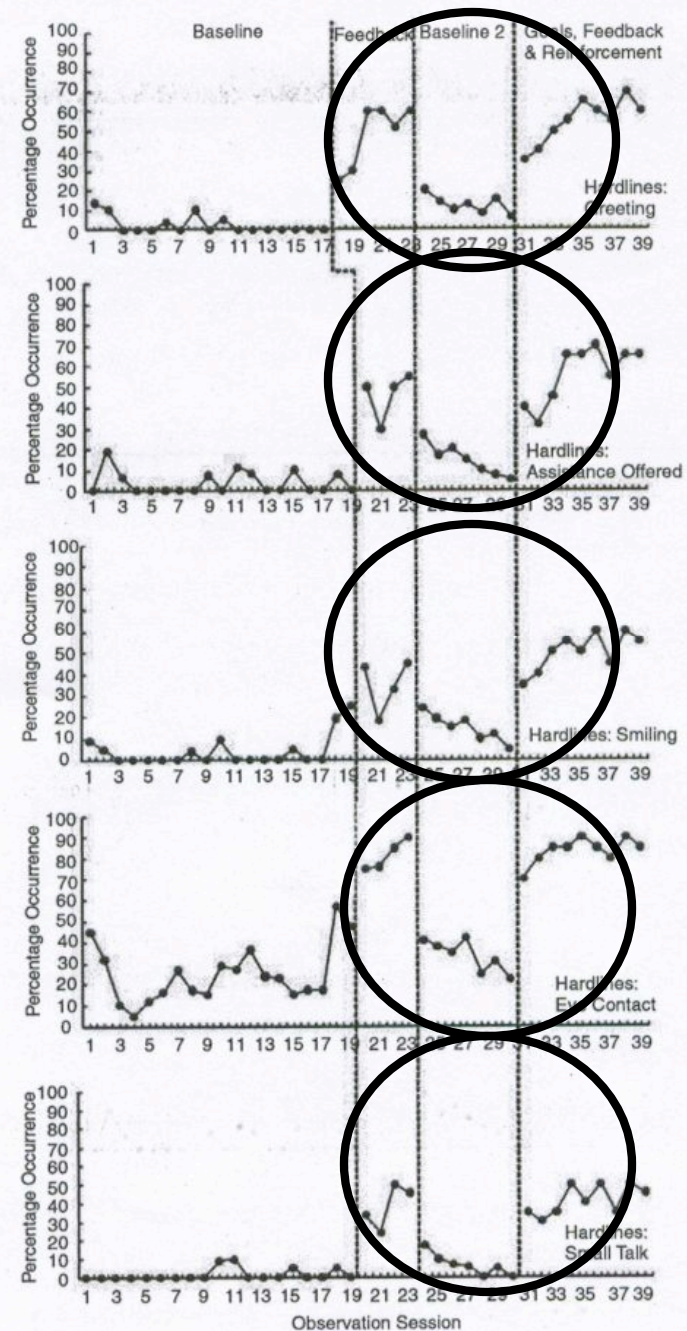
TABLE 1 (continued)

<u>Titles of the Self-Management Projects</u>	<u>Behavior Measured</u>	<u>Results: Means</u>
Scheduling/Organizing Issues:		
Increasing Filing	Time spent reorganizing files	Baseline: 0 min/day Intervention: 22.44 min/day
Increasing Filing	Time spent filing	Baseline: 10.33 min/day Intervention: 25 min/day
Increasing Computer Time	Time on computer learning programs	Baseline: 4.29 min/day Intervention: 23.18 min/day
Increasing Computer Time	Time practicing computer skills	Baseline: 0 min/day Intervention: 12.27 min/day
Increasing Use of Daily Organizer	Entries and prioritization of work in organizer	Baseline: .7 entries/day Intervention: 2.5 entries/day
Increasing Use of Daily Organizer	Entries in organizer	Baseline: .6 entries/day Intervention: 4.86 entries/day
Increasing Completion of Unfinished Work	Time spent on work backlog	Baseline: 0 min/day Intervention: 46 min/day
Increasing Writing	Time spent writing department procedures	Baseline: 45 min/day Intervention: 162.5 min/day
Increasing Phone Calls Returned	Percentage of phone calls returned	Baseline: 45% returned/day Intervention: 87% returned/day
Health/Self-Improvement Issues:		
Increasing Exercise	Time spent exercising	Baseline: 17.14 min/day Intervention: 17.22 min/day
Increasing Exercise	Time spent exercising	Baseline: 0 min/day Intervention: 6.65 min/day
Increasing Water Consumption	Cups of water consumed	Baseline: .54 cups/day Intervention: 2.83 cups/day
Increasing Recording for Medical Problems	Recording food, medication, time in notebook	Baseline: 1 recording/day Intervention: 3.08 recordings/day
Increasing the Completion of Domestic Chores	Tasks completed	Baseline: 2.8 tasks/day Intervention: 7.25 tasks/day
Decreasing Snacking	Snacks eaten	Baseline: 1.13 snacks/day Intervention: .25 snacks/day
Decreasing Fat Gram Consumption	Fat grams consumed	Baseline: 65.89 grams/day Intervention: 41.82 grams/day

Eikenhout & Austin, 2004

- Customer service
- 200+ employees retail store
- Feedback
- Feedback, Goals, R+ from managers

FIGURE 1. Percentage of Observations in Which Target Behaviors Occurred for *Hardlines*



John Austin - BSN

John.aus

# GOAL #1

## How to “Do” OBM

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# **SAFETY IMPROVEMENT**

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**[John.austin@wmich.edu](mailto:John.austin@wmich.edu)**

# Komaki, Barwick, & Scott, 1978

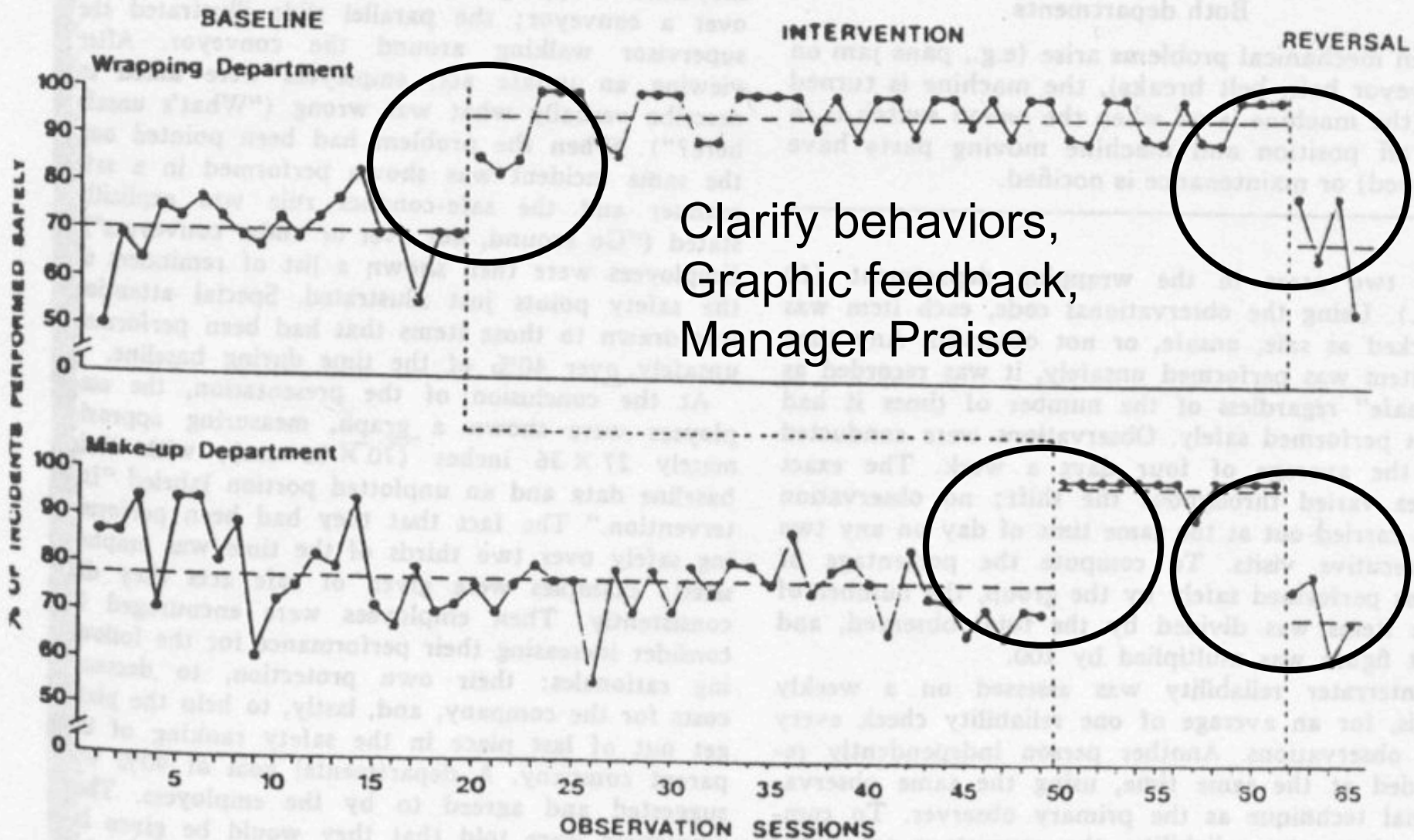


Figure 1. Percentage of items performed safely by employees in two departments of a food manufacturing plant during a 25-week period of time

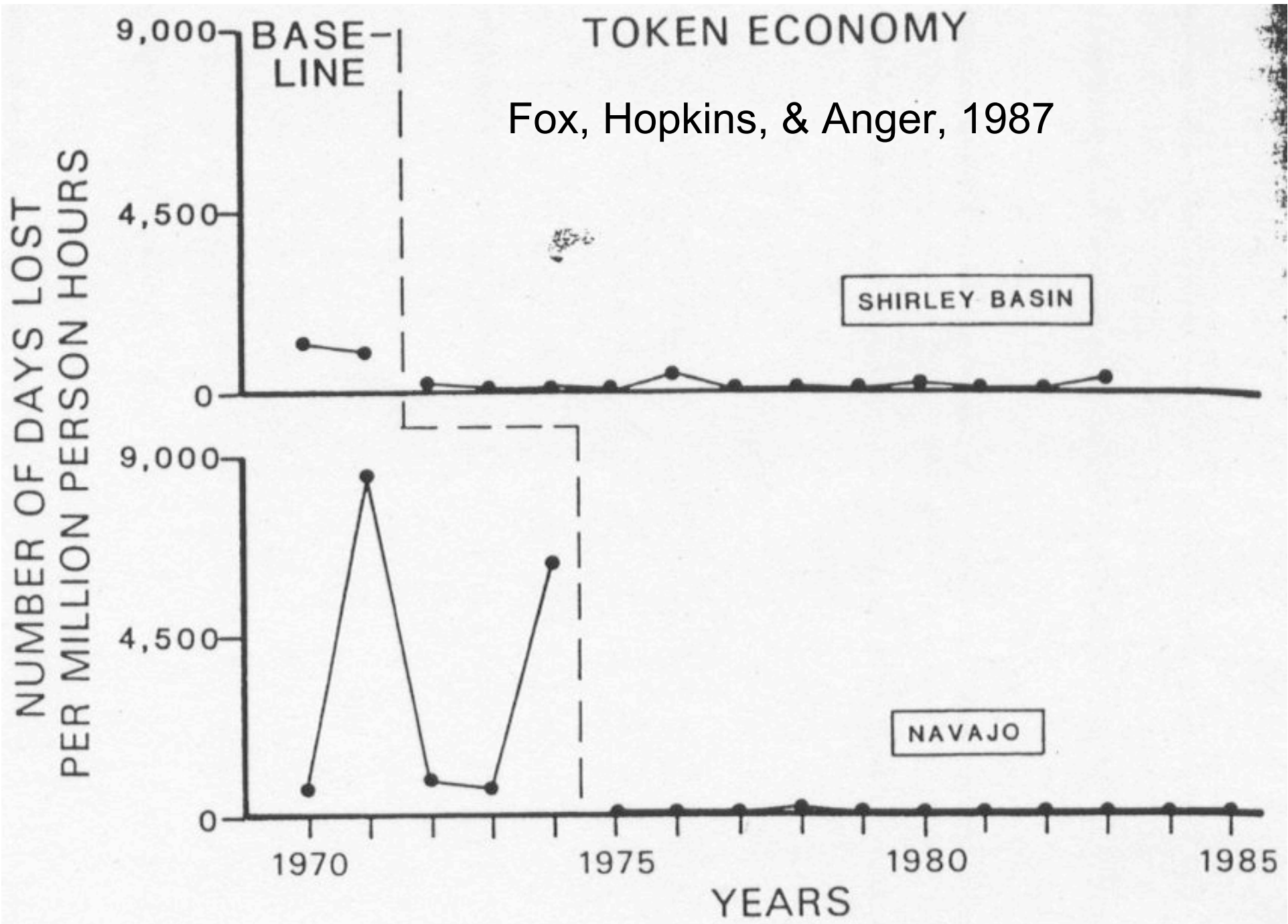


Figure 1. The yearly number of days lost from work, per million person hours worked, because of work-related injuries.

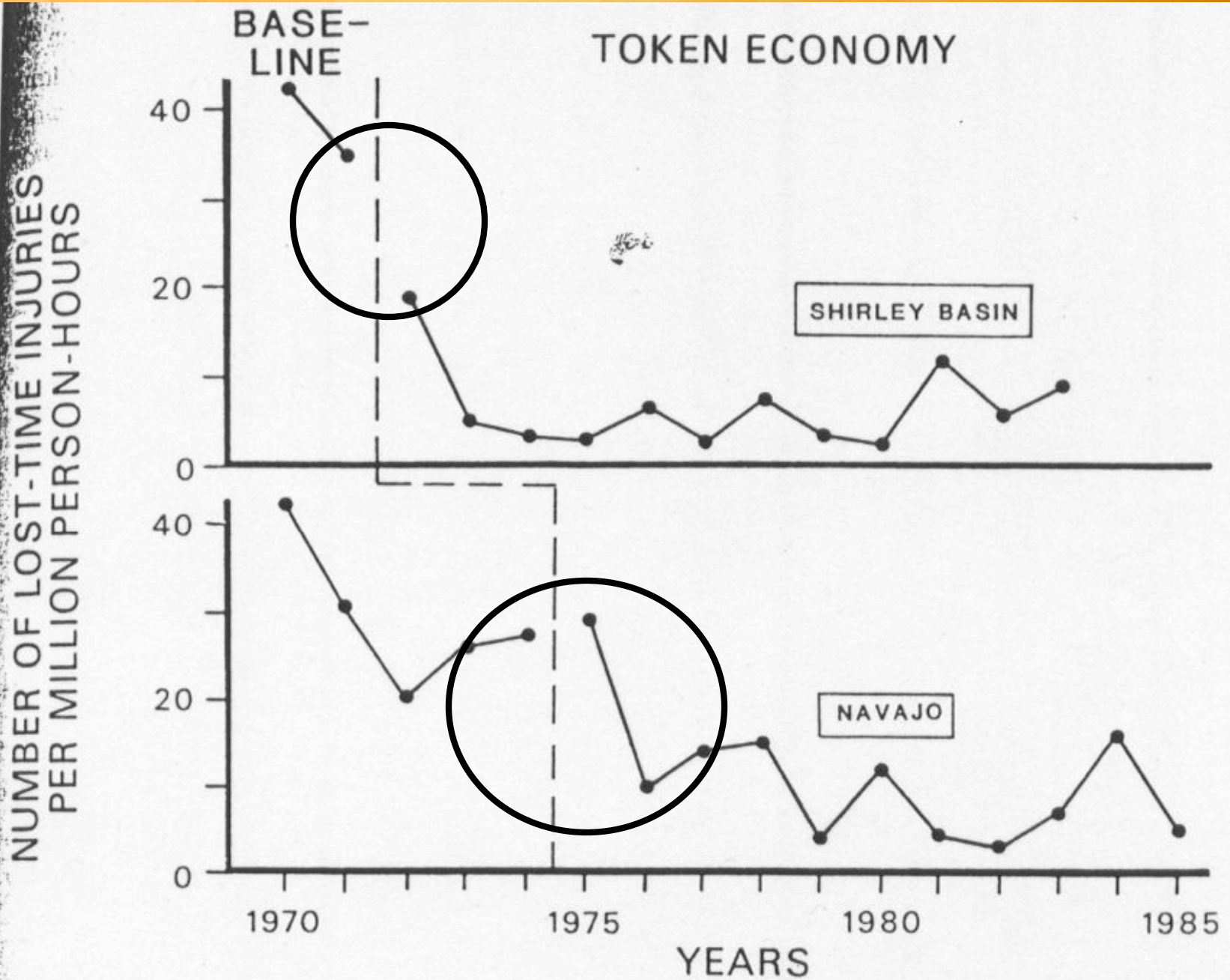


Figure 2. The yearly number of work-related injuries, per million person hours worked, requiring 1 or more days lost from work.

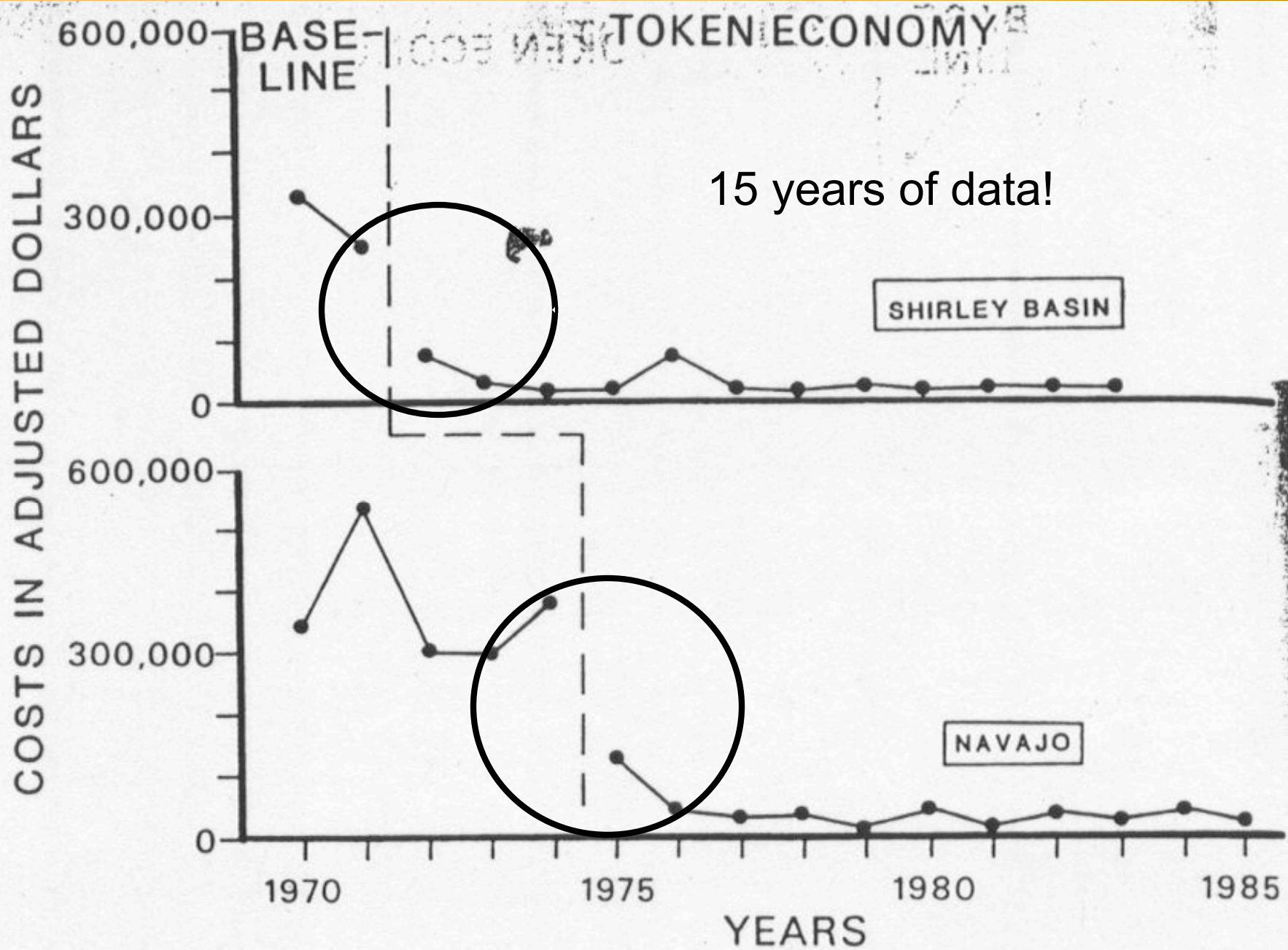
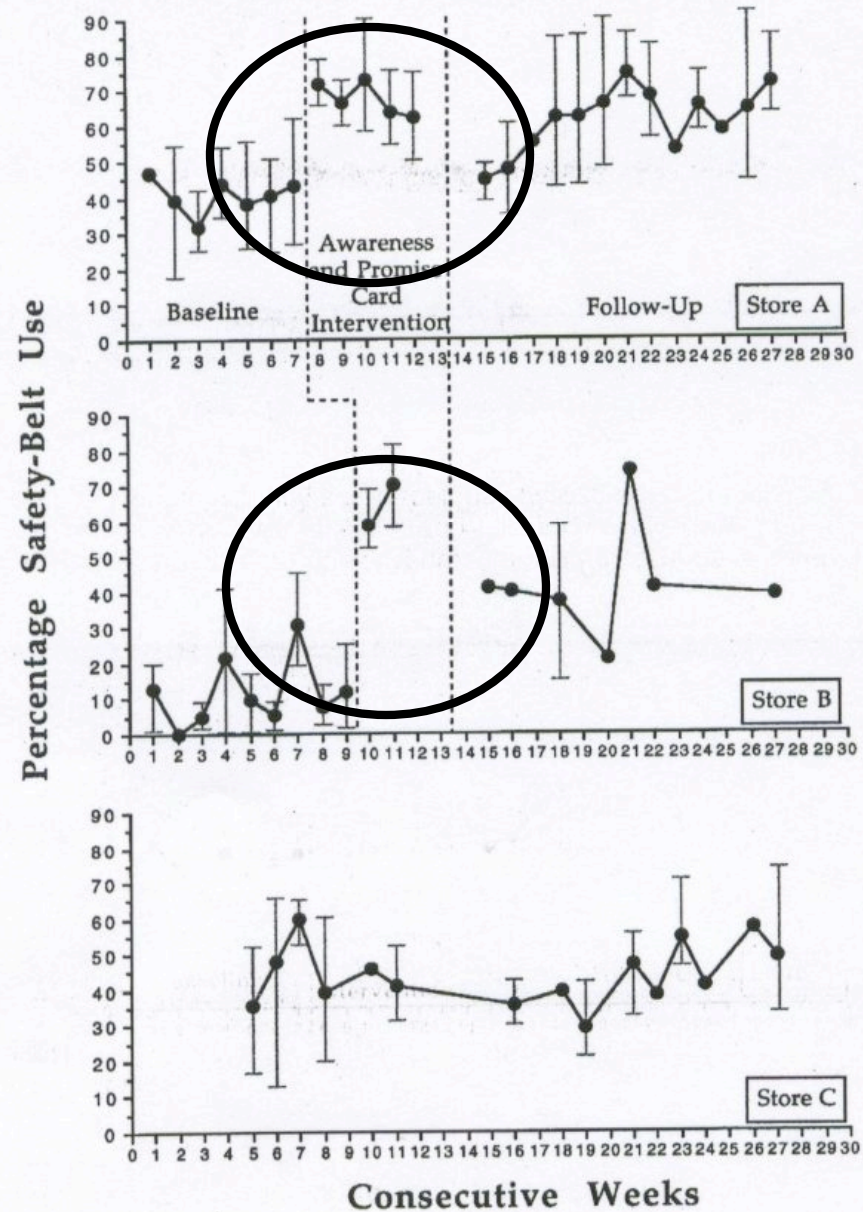


Figure 3. The yearly costs, adjusted for hours worked and inflation, resulting from accidents and injuries.

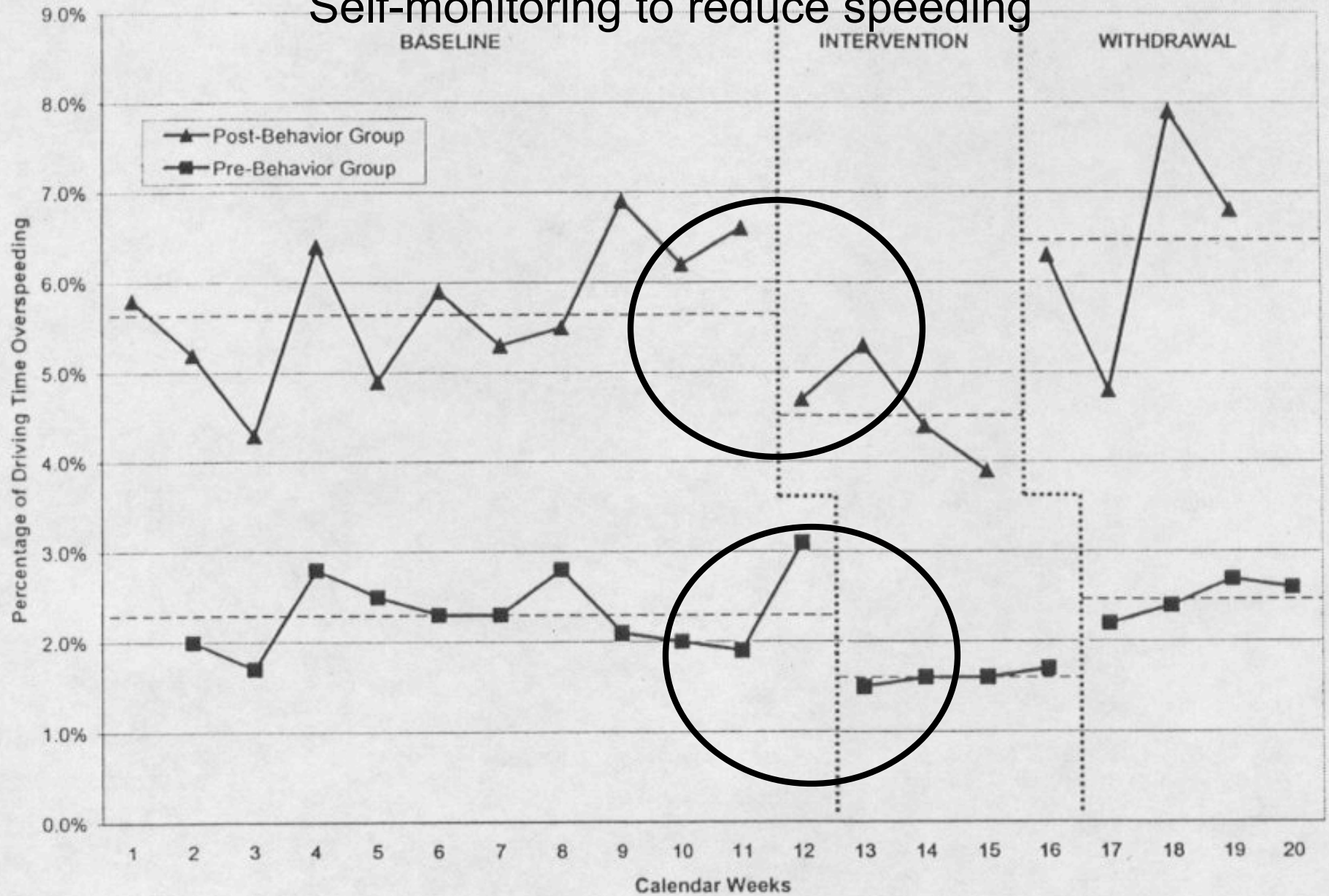
Ludwig & Geller, 2000  
 -Driver safety (seatbelts)  
 -Promise cards

FIGURE 2. Percent weekly safety-belt use across baseline, intervention, and follow-up phases at Stores A, B, and C during Ludwig and Geller (1991). Vertical lines around data points represent the range of daily safety-belt use during that week.



# Hickman & Geller, 2005

## Self-monitoring to reduce speeding



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# What's So Astonishing?

1. OBM produces *astonishingly large* effects.
2. OBM changes the way people *approach work* and the way they *feel about work*.

# Upcoming Conferences

- FABA/OBM NETWORK (all OBM, single track)
  - January 17-18th, Sarasota
  - [www.fabaworld.org](http://www.fabaworld.org)
- ABA International
  - May, 2007, San Diego
  - [www.abainternational.org](http://www.abainternational.org)

# Recommended Reading

- [www.obmnetwork.com](http://www.obmnetwork.com)
  - Get *Journal of Organizational Behavior Management and OBM Network News* as member benefits by joining the OBM Network
- [www.behavior.org](http://www.behavior.org) - Cambridge Center for Behavioral Studies
- For more information, email me at: [john.austin@wmich.edu](mailto:john.austin@wmich.edu)